PARENT INTERVENTION TO STRENGTHEN MILITARY CHILD SCHOOL READINESS AT MARINE CORPS AIR STATION YUMA, ARIZONA: A MIXED METHODS EVALUATION

by
Catherine Helen Leslie Hall McKenney

A dissertation submitted to Johns Hopkins University in conformity with the requirements for the degree of Doctor of Education

Baltimore, Maryland
April 2020

Abstract

The development of school readiness competencies, vital for school success, may be jeopardized, especially for children of enlisted service members due to the unique challenges their military families face. After examining empirical literature through the family systems perspective, the ecological systems framework, and the accommodation model of child care decisions, this study posits that improved school readiness knowledge and bolstered perceptions of community support will lead parents to select higher quality school readiness programs, which are known to improve school readiness. A parent intervention was designed and its implementation was evaluated using a mixed methods convergent parallel research design according to six process and outcome research questions. The Community Assessment of Military Perceived Support Survey, the School Readiness Knowledge Survey, the Parent Perceptions of Child Care Choices and Quality Survey, participant interviews, phone consults, and other intervention artifacts provided qualitative and quantitative data required for analysis. Qualitative analysis suggested that intervention participation increased school readiness knowledge, perceptions of community support, preferences for high-quality programs, and the likelihood that parents will prioritize quality in the future selection of school readiness opportunities. Quantitative results were inconclusive.

Keywords: military children, military families, school readiness, child care preferences, early childhood education, kindergarten, Marine Corps

Primary Reader and Advisor: Dr. Wendy Osefo

Secondary Readers: Dr. Carey Borkoski and Dr. Karen Gallagher

JOHNS HOPKINS
SCHOOL of EDUCATION

Dissertation Approval Form

Student's Name: Catherine McKenney Date: 3/24/20

Dissertation Title:

PARENT INTERVENTION TO STRENGTHEN MILITARY CHILD SCHOOL READINESS AT MARINE CORPS AIR STATION YUMA, ARIZONA: A MIXED METHODS EVALUATION

The student has made all necessary revisions, and we have read, and approve this dissertation for submission to the Johns Hopkins Sheridan Libraries as partial fulfillment of the requirements for the Doctor of Education degree.

Dr. Wendy Osefo		4/13/2020
Adviser	Signature	Date
Dr. Carey Borkoski	Carey Borkoski	4/13/20
Committee Member	Signature	Date
Dr. Karen Gallagher	Karen L. Gallagher	04/13/2020
Committee Member	Signature	Date
Committee Member	Signature	Date

Acknowledgements

Pat Tillman said, “Somewhere inside, we hear a voice. It leads us in the direction of who we wish to become, but it is up to us whether or not to follow.” Tillman describes the call I have always heard to serve my community and country and what ultimately brought me to Johns Hopkins University as a 2016 Pat Tillman Foundation Scholar.

Earning my doctorate is a dream I could not have realized without the support of so many. Of course, guiding me on this journey were many excellent Johns Hopkins University professors, including my advisor, Dr. Wendy Osefo, and committee member, Dr. Carey Borkoski. Thank you also to Dr. Karen Gallagher of Arizona State University. As an Army veteran and fellow Pat Tillman Scholar, she provided a vital military perspective to my committee.

Two incredible military spouses have mentored, motivated, and encouraged me for years. Ms. Shanna Thomas ignited my passion for early childhood education and the issues facing Marine Corps families with young children. Elena McShane continues to inspire me with her passion for and commitment to military children and their families. Both incredible women served as my executive sponsors, for which I am very grateful.

Thank you to those who inspired me to take this journey: Susan Parker (Arlington Unitarian Cooperative Preschool), Debbie Fodrie (founding teacher of New Bern Cooperative Preschool [NBCP]), and all founding parents of NBCP. I must profusely thank Lauren Faul, Jessica Creech, Leslie Plucinski, Angi Moyer, and Greta Newman for their friendship and for believing in me.

Thank you to my dear friend Bree McGregor, whom I have relied on for support and friendship throughout this journey; to the military parents and professionals who volunteered to participate in my needs assessment and intervention; and to my Johns Hopkins colleagues who enriched my doctoral experience.

When I started this degree, my three daughters were 5, 5, and 3. Attempting this rigorous program without the support of my parents and in-laws would have been ludicrous. Karen, my mother-in-law, encouraged me to apply, always remained interested in my research, and, with Will, my father-in-law, helped many times with the girls. My mother, Natalie, for the first year transported Ruby to and from preschool and kept her each afternoon; she then helped me every summer and on numerous other occasions. When I committed myself to this program, my mom did too, and she has done everything she could to ensure I would succeed. My father, Mike, encouraged me with the infamous family quote, "Press on, regardless." This is what I have done for the past three and a half years, and finally, here we are, Dad.

Finally, thank you to my husband, Mike, and our three daughters, Sophie, Teagan, and Ruby. Since I went back to school, we have moved from Virginia, to Arizona, and now to Rome, Italy; our children have attended three different schools; and Mike has been separated from us for months and worked 14 hr days 6 days a week when at home. We have experienced many stressors (and joys!) of military life that made my doctoral journey daunting. Yet, countering my fears and doubts, Mike always challenged me, "If not you, then who?" So, thank you Mike, my best friend, for helping me see my potential when I could not. You encouraged, supported, and pushed me to achieve this dream, and illuminated to our daughters that their mom is as resilient, persistent, and tenacious as their marine dad. And to Sophie, Teagan, and Ruby: You are my inspiration for this journey and all that I do. One day, when you find your passion, chase after it with all your heart and might. Just as you have helped me fulfill this dream, I will be there for you every step of the way on whatever path you choose.

Dedication

This dissertation is dedicated to all Marine Corps families, including my own.

Contents

List of Tables

List of Figures

Executive Summary

For a child to be ready for kindergarten, adequate development in multiple domains (including social-emotional and early literacy skills) must be achieved by school entry (Center on the Developing Child at Harvard University, 2016; McWayne, Cheung, Wright, & Hahs-Vaughn, 2012). However, responsive and sensitive relationships, learning experiences, and safe and nurturing environments vital for healthy development and school readiness can be jeopardized for military children due to disruptions in routines, relationships, and education that result from military life (Green, Nurius, & Lester, 2013; Harmeyer, Ispa, Palermo, & Carlo, 2016; Schmitt, Finders, & McClelland, 2015). In particular, children of enlisted marines, more so than children of officers, are at heightened risk for inadequate school readiness according to their family's demographic profile (Augustine, Cavanagh, & Crosnoe, 2009; Burchinal et al., 2011; Flake, Davis, Johnson, & Middleton, 2009; Green et al., 2013; Lester et al., 2016; Okado, Bierman, & Welsh, 2014). Research has consistently found high-quality early childhood programs can enhance school readiness, especially for vulnerable populations (Barnett et al., 2016; Duncan & Magnuson, 2013). However, military families, who would benefit greatly from such programs, face limited availability of affordable, high-quality community and military school readiness resources.

Problem of Practice

When children enter kindergarten unprepared, their future academic success and adult outcomes, such as health and income, are at risk (Burchinal et al., 2008; Heckman, Moon, Pinto, Savelyev, & Yavitz, 2010; Holliday, Cimetta, Cutshaw, Yaden, & Marx, 2014; McWayne et al., 2012). This problem of practice seeks to understand how military service influences families stationed aboard Marine Corps Air Station (MCAS) Yuma, Arizona, as they prepare their children for kindergarten, and explore interventions that may alleviate challenges these families face. This research is relevant to military operations, as a family's satisfaction with educational opportunities enhances family readiness and resiliency and promotes the recruitment and

retention of military personnel (Floyd & Phillips, 2013; Lester et al., 2016). Furthermore, the findings of this study are consequential for families of enlisted members of the military, who experience many barriers to preparing their young children for kindergarten in complex and changing contexts.

Factors Affecting School Readiness

Six factors were identified as influential in shaping the school readiness of a military child: relocation, deployment, health and well-being of the primary caregiving parent and family, military support programs and local community school readiness resources (Lester et al., 2016). The literature review found the primary caretaking parent in a military family has a disproportionate influence on the development of a military child, as well as the child's deployment and relocation experiences, and therefore this parent is the most consequential factor to the child's school readiness (Barker & Berry, 2009; Chandra, Martin, Hawkins, & Richardson, 2010; Chartrand, Frank, White, & Shope, 2008; Hisle-Gorman et al., 2015; Lester et al., 2016; Lester et al., 2010; Waliski, Bokony, & Kirchner, 2012). The literature also suggests preparing children for today's academically rigorous kindergartens requires increasing access to high-quality school readiness programs. However, local and military school readiness programs and resources available to military families have an unknown quality or are difficult to afford or access (Glenn-Applegate, Justice, & Kaderavek, 2016; Lester et al., 2012).

Dissertation Context

MCAS Yuma is located the southwestern corner of Arizona, and approximately 3,917 active-duty marines are stationed there along with 3,711 family members (Headquarters Marine Corps, Marine and Family Services, 2016). Marines from MCAS Yuma deploy frequently and have a demanding training schedule when at home. Yuma is a low-income community, and inadequate public funding for school readiness programs has constrained the availability of high-quality school readiness opportunities for both local and military children.

Theoretical Frameworks

The family systems perspective and the ecological systems theory guided this dissertation. First, the family systems framework described the interdependent and reciprocal nature of a family and illuminated how the health and well-being of the service member, primary caregiving parent, and their marriage are consequential for young children (Cox & Paley, 1997). This perspective also explains how the experiences of military life are primarily mediated through the family system for military children (Kelley, Finkel, & Ashby, 2003; Lester et al., 2016). Next, the ecological systems theory detailed the bidirectional interactions that occur between many systems that together affect a child's development and school readiness (Bronfenbrenner & Morris, 2006).

Needs Assessment Findings

The needs assessment investigated the six factors hypothesized to impact military child school readiness, including local and military school readiness resources and the military family. Semistructured interviews ($N = 12$) with parents, teachers, and local- and national-level professionals serving military families revealed challenges faced by military families when preparing their children for kindergarten. These difficulties included identifying high-quality school readiness programs without adequate quality ratings, low availability of high-quality programs, inadequate support by local and military programs, affordability concerns, reliance on word of mouth and social media reviews, and the high cost and long waiting lists for the on-base accredited child development center (CDC). Participants reported that young families of enlisted members of the military with low educational attainment, low-income, or poor parenting skills were at higher risk of experiencing school readiness challenges than families of officers, but the parents in these at-risk families were also least likely to take advantage of available resources. Also, families who sought community support improved family resilience and buffered themselves from adverse effects of military life.

Conceptual Framework

Based on the family systems perspective and ecological systems theory, the conceptual framework posits that child, family, community, and societal factors profoundly impact a military child's health and well-being, educational opportunities, and school readiness outcomes. However, the primary caregiving parent of a military child is most consequential for the child's development and is, therefore, the focus of this study's conceptual framework.

The accommodation model of childcare decisions also informed the conceptual framework. It posits that parents evaluate school readiness opportunities, constraints, and barriers to participation according to a combination of preferences, community factors, logistical constraints, and affordability (Chaudry, Henly, & Meyers, 2010). The model also suggested that parents' preferences for school readiness programs are open to change through social interactions and social norms communicated through their social network and community organizations (Chaudry et al., 2010; R. Weber, 2011). Therefore, interventions that focus on shifting parents' preferences toward high-quality school readiness opportunities were determined to be a plausible method for addressing this problem of practice.

Parent Interventions

Empirical research on school readiness interventions found that informational programs for parents are a promising method by which to produce impacts (Bassok, Markowitz, Player, & Zagardo, 2018; Dechausay & Anzelone, 2016). By providing parents with information about school readiness program quality, informational interventions aim to shift parents' preferences toward higher quality programs, which will cause them to prioritize school readiness program quality in their decision-making (Bassok et al., 2018). For military families, a hybrid approach (virtual and in-person) may increase access and encourage full participation by reducing the stigma families feel during exclusively in-person programs, provide the necessary flexibility for this very mobile population, and ensure needed community support is incorporated into the

intervention's design (Blasko & Murphy, 2016; DiNallo, Kuhl, Borden, & Perkins, 2016; Doty, Rudi, Pinna, Hanson, & Gewirtz, 2016).

Research Purpose and Methodology

To improve military child school readiness, this study sought to increase parents' preferences for high-quality school readiness programs through improved school readiness knowledge and community support. The intervention's purpose was to maximize the future selection of high-quality programs within a family's contextual limitations (Chaudry et al., 2010). The measurement of distal outcomes (readiness upon kindergarten entry) was beyond the scope of this dissertation, but the researcher hypothesized that measurable changes in preferences could alter future parent behavior or decision-making: if parents understand the importance of school readiness program quality and have access to community support, they will make efforts to identify and participate in these programs, thereby improving military child school readiness.

Research Questions

Six process and evaluation research questions guided this study.

Process research questions. Research Question 1 (RQ1): To what extent did participants complete intervention activities? Did the researcher deliver the program as intended?

Research Question 2 (RQ2): How did the research design alleviate or intensify contextual constraints that affect participation?

Research Question 3 (RQ3): What were participant perceptions of their intervention experience?

Outcome research questions. Research Question 4 (RQ4): To what degree did participants' perceived community support change from pre- to postintervention?

Research Question 5 (RQ5): To what extent did participants' school readiness knowledge change from pre- to postintervention?

Research Question 6 (RQ6): How did participants' school readiness preferences change from pre- to postintervention?

Research Design

A mixed methods convergent parallel research design approach was selected based on its pragmatic ability to address each research question, as qualitative or quantitative approaches alone were deemed insufficient or lacking in depth (Creswell & Clark, 2011; Onwuegbuzie & Leech, 2006). Typical of convergent parallel research design, qualitative and quantitative data were collected concurrently, had equal priority, were initially analyzed separately, and were later compared side by side (Creswell & Clark, 2011).

Intervention

Primary caregiving parents ($N = 8$) from families of enlisted Marine Corps members participated in the intervention, which included two major activities: a one-time, 1.5-hr group training followed by individual phone consults. This hybrid delivery design was selected to meet the unique requirements of military families, including their need for community support and scheduling flexibility (Blasko & Murphy, 2016; Day & Sanders, 2017; DiNallo et al., 2016; Doty et al., 2016; Duppong-Hurley, Hoffman, Barnes, & Oates, 2016; Heath et al., 2017). The purpose of the group session was to strengthen the parent's child development and school readiness knowledge, learn about characteristics of high-quality school readiness programs, and explore ways to access these programs despite contextual constraints. The training utilized social learning techniques, such as modeling and coaching, to actively develop parenting skills (Ansari & Gershoff, 2016; Beardslee et al., 2011; Sabol, Hong, Pianta, & Burchinal, 2013; Walsh, 2012). The phone consult reinforced learning from the in-person training and addressed school readiness topics as they pertained to the family.

Data Collection and Analysis

Quantitative data included pre- and postintervention scores from the Community Assessment of Military Perceived Support Survey (Conforte et al., 2017), the School Readiness Knowledge Survey, and the Parent Perceptions of Child Care Choices and Quality Survey (Raikes et al., 2005). Data from an attendance log and a preintervention demographic survey

were also collected. Descriptive statistics and the Wilcoxon signed-rank test were used to analyze quantitative data. Qualitative data included researcher debriefing notes, pre- and postintervention interviews, phone consult transcripts, and follow-up e-mail content. Descriptive and pattern coding were used to analyze qualitative data (Saldana, 2016). Limitations of the study include the small sample size and lack of a comparison group.

Findings and Conclusions

Quantitative and qualitative data diverged in this study. The Wilcoxon signed-rank test failed to find statistically significant changes between pre- and postintervention data. However, analysis of qualitative data suggested the intervention increased perceptions of community support, school readiness knowledge, and parent preference for high-quality programs. All participants reported their newly developed preferences would result in the selection of high-quality school readiness opportunities in the future. The study also revealed the primary caregiving parents from enlisted families lacked adequate local and military school readiness support and additional resources, such as this study's informational intervention, could improve school readiness outcomes for military children. Future research on the school readiness landscape at other Marine Corps bases and the experience of officer families is recommended. The study also suggests changes in practice, including a realignment of resources, will better meet the school readiness needs of enlisted Marine Corps families.

Chapter 1: Introduction to the Problem of Practice

Like their civilian counterparts, military families face the complex and costly prospect of preparing their young children for kindergarten. However, military families' distinctive lifestyle may influence the school readiness of their young children. The purpose of this chapter is to explore the landscape in which military families ready their children for school and the factors influencing their kindergarten readiness.

First, school readiness and its relationship to student outcomes are introduced. Then, guided by the family systems perspective and the ecological systems theory, six influential factors (relocation, deployments, the military family, parental health, military support programs, and local resources) identified in the literature to drive military child school readiness are explored (Bronfenbrenner & Morris, 2006; Cox & Paley, 1997; Walsh, 2012). Together, the synthesis of relevant literature and pertinent tenets of each theoretical framework informed the conceptual framework, which clarifies the relationships between factors thought to drive school readiness for military children.

School Readiness Concept

School readiness is a multifaceted concept that encompasses critical competencies for kindergarten, including social-emotional skills, preliteracy skills, and approaches to learning (McWayne et al., 2012). When children lack the opportunities to develop school readiness proficiencies by age 5 years, they may face considerable difficulty transitioning to kindergarten and struggle academically in the years to follow (Brown & Lan, 2015; Holliday et al., 2014; McWayne et al., 2012; Reardon & Portilla, 2016). Lifelong individual and societal consequences can also result from compromised development in the first 5 years of life, including poor health, low income, and increased crime rates (Heckman, 2008). Military children are not immune to the consequences of poor kindergarten preparation; in fact, military life may create additional obstacles (e.g., frequent relocation) that intensify suboptimal outcomes.

The conceptualization of school readiness has evolved over the last several decades. An examination of these changes through political, sociological, and economic perspectives provides a vital frame of reference for understanding kindergarten preparedness for military children today. Since the rise of the accountability movement, culminating with the No Child Left Behind legislation adopted in 2001, the role of the teacher, school, and child in achieving school readiness has changed (Brown & Lan, 2015). Previously, school readiness was understood as dependent on a child's natural development, which was influenced little by the teacher or school. Following accountability legislation, teachers and schools assumed responsibility for developing readiness skills and knowledge (Brown & Lan, 2015). However, both of these perspectives are at odds with those of early childhood education advocates who view school readiness as influenced by multiple forces. They find schools and teachers, a child's natural development, community resources, and home experiences to all be vital to school readiness (Brown & Lan, 2015).

To empirically measure changes in school readiness conceptualization, Bassok, Latham, and Rorem (2016) utilized a multistage probability design to analyze data from 2,500 teachers in 1998 and 2,700 teachers in 2010 from the Early Childhood Longitudinal Study kindergarten cohort. The authors found teachers in 2010 had raised academic expectations of kindergarteners, increased instructional focus on academics, and decreased child-directed learning, art, music, and science (Bassok et al., 2016). Following Bassok et al.'s (2016) investigation, Walter and Lippard (2016) sought to understand how these changes in kindergarten had influenced early childhood education. Using the Head Start Family and Child Experience Survey data from 2000, 2003, 2006, and 2009, Walter and Lippard evaluated the beliefs of 1,491 early childhood teachers on developmentally appropriate practice (DAP) and the frequency of literacy and math instruction in their classrooms. Analysis of variance and linear regression analysis revealed that after 2003, DAP beliefs of teachers decreased, especially for those with less education or training. By 2006, the influence of elementary expectations was evident, as early childhood education instruction emphasized the development of academic skills rather than DAP (Walter & Lippard, 2016). Brown and Lan (2015) also found an "endless shove down of academic performance

expectations from elementary school stakeholders to kindergarten and Pre-K" (p. 7). For military children to meet these heightened expectations, kindergarten preparedness is more important than ever.

A limitation of these studies is the unknown impact of an increased academic focus on the future cognitive and social development of a child (Bassok et al., 2016). In fact, Arnold, Kupersmidt, Voegler-Lee, and Marshall (2012) note the optimal intersection of academic, social, and other school readiness skills is evolving as empirical evidence continues to provide refinements (Li, Farkas, Duncan, Burchinal, & Vandell, 2013; McWayne et al., 2012; Sabol & Pianta, 2012). As a result, the definition of a high-quality school readiness program is in flux. However, essential components of an outstanding program remain unchanged and include warm and nurturing relationships, intentional instruction, promotion of health, parental involvement, qualified staff, an assessment system, and implementation of early learning standards (Arnold et al., 2012).

School Readiness Program Quality

Over 50 years ago, seminal studies established that high-quality early childhood educational opportunities play a significant role in school readiness. In the 1960s and 1970s, the Perry Preschool Program and the Abecedarian Program found positive correlations between early, high-quality interventions and school readiness measures, in both the short- and long-term, for low-income children (Heckman, 2008; Heckman et al., 2010). Current research continues to find a positive relationship between high-quality early childhood programs and school readiness, yet returns are lower than demonstrated by the Perry Preschool and Abecedarian programs (Duncan & Magnuson, 2013). Improved home environments, lower poverty rates, and the prevalence of low-quality programs for at-risk children are hypothesized explanations for today's reduced returns (Burchinal et al., 2008; Howes et al., 2016).

Research linking high-quality early childhood education programs to improved school readiness has driven increased federal, state, and local investment in early childhood education

over the past 15 years (Barnett et al., 2016). As a result, the capacity of public-school readiness programs has expanded, and attendance in primarily prekindergarten programs has increased. However, the number of children that public school readiness programs can accommodate varies considerably nationwide (Barnett et al., 2016; Bassok et al., 2016; Holliday et al., 2014; Reardon & Portilla, 2016; U.S. Department of Education, 2015). Due to limited funding, enrollment is typically restricted to families that meet strict income requirements. As a result, many low- and middle-income children remain ineligible for public preschool programs and are left to navigate the complex (often unregulated) network of private early childhood education programs or informally prepare their children at home (Lipscomb, 2013; Torquati, Raikes, Huddleston-Casas, Bovaird, & Harris, 2016). Depending on family income, which is typically linked to rank for military families, military children may not meet financial qualifications for public programs.

For low- and middle-income children who do not qualify for public preschool, the school readiness programs they can typically afford are of lower quality. To examine the relationship between the cost and quality of programming, Lipscomb (2013) collected data using quantitative surveys and qualitative interviews from 180 families earning 185% or less of the federal poverty line. This mixed methods study revealed that a U-shaped curve portrayed the relationship between household income and early childhood program quality: High-income families and families at or below the federal poverty line had better access to high-quality programs, while low- and middle-income families had the most difficulty accessing and affording high-quality care. Torquati et al. (2016) also detected this U-shaped relationship between income and quality. They found that families earning 200% or less of the federal poverty line were unable to access high-quality school readiness programs due to unaffordable tuition and a lack of availability of these programs near their homes. Hatfield, Lower, Cassidy, and Faldowski (2016), using North Carolina as a case study, also considered the availability of, and access, to high-quality programs. They retrieved data on program quality ratings, community demographics, sources of financing, state subsidies, and public prekindergarten for 3,157 licensed centers and 3,725 family childcare homes. The study found low-income communities were most likely to have low-quality

school readiness opportunities; access to high-quality programs was therefore constrained for low-income children. With military installations located in communities that vary widely in wealth and resources, the availability of high-quality school readiness programs is uncertain for military families. Moreover, with the majority of military families qualifying as low- to middle-income, the quality of affordable and accessible school readiness programs is also a concern.

School Readiness Opportunity Gap

Heightened expectations of rising kindergarteners and inequitable allocation of resources for young children in the United States has led to a school readiness opportunity gap (Bassok et al., 2016; Reardon & Portilla, 2016; U.S. Department of Education, 2015). This inequity is the result of school-, community-, and family-level factors from birth through kindergarten entry (McWayne et al., 2012; Sabol & Pianta, 2012). Children of racial and ethnic minorities, mothers who are young at the time of birth, single mothers, mothers with low educational attainment, low-income families, and families with poor parent-child interactions are most at risk for poor kindergarten preparation (Augustine et al., 2009; Green et al., 2013; Heckman, 2008; Hur, Buettner, & Jeon, 2015; Reardon & Portilla, 2016). Parents in families of enlisted military personnel fall into several of these at-risk categories: they are young, have low family income, and have limited educational attainment (Flake et al., 2009; Lester et al., 2016). Therefore, the risk of their children being underprepared for kindergarten is elevated.

Investigating the origins of the school readiness opportunity gap, McWayne et al. (2012) used child assessments, teacher reports, and parent reports from the Family and Children's Experiences Survey 2000 cohort for 1,898 children at the beginning of Head Start and the end of kindergarten. The researchers found child-level factors were most predictive of kindergarten outcomes. However, family factors were also significant: high maternal education was predictive of better cognitive outcomes, and authoritarian parenting resulted in less language development (McWayne et al., 2012). Trends in the school readiness opportunity gap have also exposed differences in the preparedness of children according to family income and race or ethnicity. A

recent empirical study by Reardon and Portilla (2016) examined student assessments, parent interviews, and teacher surveys for 21,400 kindergarteners in 1998 and 18,170 kindergarteners in 2010 from the Early Childhood Longitudinal Study. From 1998 to 2010, the authors found the Hispanic/White school readiness gap persisted, but had decreased, and there was no change in the Black/White school readiness gap (Reardon & Portilla, 2016). Reardon and Portilla cite the inability to explain modest school readiness improvements for some students as a limitation of their study but posit increased access to health care and enrollment in public early childhood programs as potential reasons. To further understand the divergence in readiness levels among Black and White children, Burchinal et al. (2011) retrieved longitudinal data for 1,364 children from the National Institute of Child Health and Development Study of Early Child Care and Youth Development, including academic achievement in primary school, demographic characteristics, parenting attitudes, mother's depressive symptoms, neighborhood disadvantage, child care access, elementary school characteristics, and cognitive skills at age 3 years. The researchers employed hierarchical linear modeling and identified a racial achievement gap as early as 1 year of age attributable to neighborhood, family, and school factors (Burchinal et al., 2011). In sum, the school readiness opportunity gap is driven by a combination of child-, family-, community, and society-level factors.

Problem Statement

When children enter kindergarten lacking essential school readiness competencies, their future academic success and adult outcomes, such as health and income, are at risk (Burchinal et al., 2008; Heckman et al., 2010; Holliday et al., 2014; McWayne et al., 2012). The likelihood of inadequate preparation for school is heightened in military populations. Jeopardizing efforts to ready military children for today's rigorous kindergartens are disruptions in routines, relationships, and education due to the military lifestyle (Green et al., 2013; Harmeyer et al., 2016; Schmitt et al., 2015). Furthermore, some military families exhibit at-risk characteristics for poor school readiness, including low income, low maternal education, and poor psychological

health (Augustine et al., 2009; Burchinal et al., 2011; Green et al., 2013; Okado et al., 2014). This problem of practice seeks to understand how military affiliation has influenced the school readiness of children currently stationed aboard MCAS Yuma in Arizona.

Beyond safeguarding a military child's future academic success, high-quality school readiness opportunities improve military families' quality of life. The perception of satisfaction with educational opportunities and other elements of family life is vital to military operations: It enhances family readiness and resiliency and promotes the recruitment and retention of seasoned military personnel (Floyd & Phillips, 2013; Lester et al., 2016). State and national trends in school readiness indicate military families aboard MCAS Yuma may face challenges in preparing their children for kindergarten (Barnett et al., 2016). Therefore, whether military life exacerbates school readiness challenges faced by families is vital to ascertain for both military parents and military leadership.

Theoretical Frameworks

Together, the family systems perspective and the ecological systems theory guided this inquiry into the school readiness of military children.

Family Systems Perspective

The family systems perspective describes the interdependent, transactional, and reciprocal nature of a family (Cox & Paley, 1997). According to this framework, individuals are only understood when situated within the context of their families (Paley, Lester, & Mogil, 2013). If one family member or relationship is affected, other individuals or relationships within the family system are impacted, and this reaction circles back to influence the initiating family member or relationship (Paley et al., 2013). Therefore, the health and well-being of the service member, primary caregiving parent, and their marriage are consequential for positive parent–child relationships and child outcomes (Kelley et al., 2003; Lester et al., 2016).

This interconnectedness of the family illuminates how the impact of military life on young children is primarily mediated through the family system (Lester et al., 2016). However,

the family systems perspective also acknowledges the significant impact external systems, such as schools and communities, have on a child's development (Cox & Paley, 1997). Furthermore, the family systems perspective describes families as capable of "adaptive self-stabilization" (Cox & Paley, 1997, p. 250), or being able to alter the patterns and structure of the family system to adapt to changing circumstances. For military families, who routinely experience changes in their environment and relationships, this suggests they can evolve to meet new challenges. Therefore, military families may be amenable to family interventions that potentially improve school readiness.

Ecological Systems Theory

The ecological systems theory describes human development according to process, context, person, and time (Bronfenbrenner, 1994). According to Bronfenbrenner's (1994) theory, proximal processes—or reciprocal and progressively complex interactions with persons, objects, or symbols in the immediate environment—drive and sustain human development (Bronfenbrenner, 1994; Bronfenbrenner & Morris, 2006; Paley et al., 2013). The quality of proximal processes is determined by the attributes of the individual, the setting, and surrounding systems. Also, high-quality proximal processes, such as parent–child interactions, can buffer or reduce the negative influence of the environment (Bronfenbrenner, 1994).

The context or environment, as visualized by Bronfenbrenner (1994), is a multileveled, nested, and interdependent system. Like a target, a developing person is located centrally within the microsystem (smallest, innermost ring), with the mesosystem, ecosystem, macrosystem, and chronosystem emanating outward (Bronfenbrenner & Morris, 2006). The microsystem (e.g., family) is the person's immediate environment, where proximal processes occur. The mesosystem, or the system closest to the microsystem, includes two or more microsystems in which the developing person resides, such as the interaction between home and school. The exosystem includes two or more settings, one of which does not contain the developing person. While the individual does not interact directly with that setting, what occurs there still impacts

proximal processes in the person's immediate environment (Bronfenbrenner, 1994). For example, a primary caregiving military parent does not directly interact with his or her spouse's place of work but is profoundly affected by it. The macrosystem encompasses cultural or societal norms and policies, such as early childhood education initiatives or military funding for family support programs. Decisions made in the macrosystem have a significant effect on school readiness. For example, public funding for preschool programs may provide educational opportunities that previously were unaffordable or unavailable. Lastly, the chronosystem adds the element of time to illustrate how changes throughout life impact development. These changes include personal events, such as moving or deployments, as well as historical developments, such as military engagements or elections (Bronfenbrenner & Morris, 2006). Collectively, all five systems influence the proximal processes that drive a child's development. Therefore, the ecological systems theory provided an invaluable guide for exploring the factors that influence the school readiness of a military child.

Conceptual Framework

The conceptual framework (Figure 1) explains the relationships between the six factors (deployment, relocation, the primary caregiving parent, the military family, local resources, and military resources) that influence military child school readiness. Both the literature review and the two theoretical frameworks (the family systems framework and the ecological systems theory) contributed to conceptual framework's design. Furthermore, Neal and Neal (2013) reimagined the complex social interactions and relationships between systems in the ecological systems theory as networked, rather than nested. This networked approach influenced the conceptual framework's design by recognizing the social interactions that occur between systems and their effect on development.

Figure 1. Conceptual framework.

The conceptual framework posits that child, family, community, and societal factors profoundly impact a military child's health and well-being, educational opportunities, and school readiness outcomes. Besides every child's distinct developmental trajectory and the influence of

multiple external systems, the primary caregiving parent is paramount to a child's development and, therefore, school readiness (Neal & Neal, 2013). Thus, the primary caregiving parent, not the child, is the focal individual, or the developing person, in this conceptual framework. Of interest is the acquisition of knowledge, skills, preferences, and personal capacity of a primary caregiving parent required to provide high-quality opportunities for his or her child's kindergarten preparation.

As illustrated in Figure 1, a military family comprises the microsystem for a young military child. The primary caregiving parent holds a disproportionate share of the parenting responsibilities as a result of the service member's work obligations and therefore is paramount to the child's development. School readiness programs and other community support entities comprise the mesosystem in which interactions between parent and community occur (Neal & Neal, 2013). The primary caregiving parent interacts with local and military resources to determine the availability, affordability, and accessibility of high-quality school readiness programming (Duncan & Magnuson, 2013). Finally, the military, or the service member's employer, constitutes the exosystem. The primary caregiving parent is not in this setting but is influenced by it through the service member (Neal & Neal, 2013).

The macrosystem and the chronosystem are not overtly included in Figure 1, but they do impact the social interactions taking place within and between the microsystem, mesosystem, and exosystem (Bronfenbrenner, 1994; Neal & Neal, 2013). For instance, in the macrosystem, prekindergarten programs have garnered political and financial support as their contribution to improved school readiness has been increasingly acknowledged (Barnett et al., 2016). Moreover, relocations, deployments, the birth of additional children, or other changes over time comprise the chronosystem and impact military child school readiness.

Underlying Factors Affecting the School Readiness of Military Children

Child, family, community, societal, and historical factors converge from birth to age 5 years to influence the school readiness of a rising kindergartener (McWayne et al., 2012; Sabol

& Pianta, 2012). This literature review focuses on the six factors identified as most influential in shaping the school readiness of a military child.

Conduct of the Literature Review

The following literature review considered how the intersection of six factors contributes to the school readiness of a military child. These factors include deployment, relocation, the primary caregiving parent, the military family, local resources, and military resources. Found in multiple databases, including ERIC and JSTOR, the literature included in this synthesis was accessed through the Johns Hopkins University Library. *School readiness*, *early childhood education*, *children of military personnel*, *residential mobility*, and *deployment* were search terms frequently used in this inquiry. Considered for inclusion was empirical research from peer-reviewed journals conducted no earlier than 2003. This year corresponds to the beginning of prolonged military operations in Afghanistan and Iraq. Since then, military children have faced new challenges unique to this conflict, including multiple deployments (Lester et al., 2010). Therefore, limiting the literature review to contemporary investigations provides the most relevant findings for this problem of practice. However, the current base of literature on military children is limited for those aged 0–5 years (Anderson, Leventhal, & Dupéré, 2014; Barker & Berry, 2009; Chartrand et al., 2008; Lester et al., 2016; Lleras & McKillip, 2016; Schmitt et al., 2015). Out of necessity, some literature included in this synthesis includes analogous research on elementary-aged military children or civilian children under the age of 5 years.

Relocation

Due to changes in work assignments, active-duty military service members receive mandatory orders to relocate to new duty stations across the United States and internationally every 2–3 years (Floyd & Phillips, 2013). As a result, military families are frequently uprooted and required to reestablish their social networks, housing arrangements, spousal employment, and children's educational opportunities. There have been many efforts to support kindergarten through 12th-grade military children as they transition between schools, which they do an

average of six to nine times (Aronson, Caldwell, Perkins, & Pasch, 2011). For instance, the military provides universal support programs and resources to ensure consistency between duty stations, such as the School Liaison Program (SLP; Aronson et al., 2011). Furthermore, the Interstate Compact on Educational Opportunities for Military Children, voluntarily adopted by all 50 states, provides guidelines on enrollment, records transfer, school placement, and other issues faced by military students relocating to new states and localities (U.S. Department of Defense Education Activity, 2018). However, for military children aged 0–5 years, comparable efforts to support school readiness during relocation have been absent (Anderson et al., 2014; Lleras & McKillip, 2016; Schmitt et al., 2015). Inadequate empirical research on the effect of relocations on school readiness for military children may help explain this lack of support.

Exploring analogous studies of civilian children aged under 5 years provides some understanding of relocation and school readiness. However, these comparisons have constrained utility: civilian families move for different reasons, including family hardships, and—unlike military families—they lack formal support systems in their new location (Cozza & Lerner, 2013). While recognizing the differences between civilian and military moves, the literature on relocation posits that moving during early childhood negatively impacts a child's school readiness (Anderson et al., 2014; Schmitt et al., 2015). A qualitative study by Schmitt et al. (2015) surveyed socioeconomically disadvantaged parents on residential mobility, assessed 359 preschoolers aged 3–5 years on math and literacy using the Woodcock-Johnson III or the Bateria III Woodcock-Munoz tests, and assessed the inhibition control of the preschoolers utilizing the day–night Stroop test. The study found a negative association between more frequent moving and math, literacy, and inhibition control in both the fall and spring of preschool. Relocation was found to impact the child indirectly: Effects were mediated through the family, the mother in particular. The sample consisted of civilian families, which limits the study's applicability to this problem of practice.

Investigating how residential mobility, family, child achievement, and behavior were associated, Anderson et al. (2014) used data from 1,056 children in the National Institute of

Child Health and Human Study of Early Child Care and Youth Development study, which tracked children on a multitude of measures from birth to age 15 years. Like Schmitt et al. (2015), Anderson et al. found mobility impacted child achievement and behavior through family processes such as the home environment or parenting. Moreover, Kelley et al. (2003) found that the most significant factors affecting the academics and well-being of a military child during a move, including the ability to adjust to new surroundings and maintain self-esteem, were parent well-being and family relationships.

As with deployments, explored later in this chapter, studies indicate young children are affected by relocation primarily through the family system. For example, moving can create stress for a family through disruptions in routines, financial strain, a decrease in social support, or a reduction in educational opportunities (Anderson et al., 2014). As a result, maternal depression, insensitive parenting, a poor home environment, ineffective family processes, or marriage difficulties can occur, straining parent–child relationships (Anderson et al., 2014; Kelley et al., 2003; Lleras & McKillip, 2016; Schmitt et al., 2015). Consequently, a child may exhibit internal behaviors—such as depression, anxiety, or low self-esteem—and external behaviors—including aggression, lack of self-control, or difficulty paying attention—that jeopardize the development of school readiness competencies (Anderson et al., 2014; Kelley et al., 2003; Lleras & McKillip, 2016; Schmitt et al., 2015).

Research on the effect of relocation on military children has produced various conclusions, yet overall findings suggest it has negative consequences (Anderson et al., 2014; Schmitt et al., 2015). Studies show that the total number of moves a child experiences, beginning in early childhood, correlates positively with their risk for diminished academic achievement and well-being (Lyle, 2006; Schmitt et al., 2015; Ziol-Guest & McKenna, 2014). However, Kelley et al. (2003) rejected this conclusion in their quantitative study of 86 military mother–child dyads that included children in kindergarten through 12th grade. Mothers and children completed questionnaires, including the Center for Epidemiologic Studies-Depression Scale and the Perceived Stress Scale. Data were examined using multiple regression analyses. Kelley et al.

concluded that the length of time at one duty station, or how long a family stays in the same location, is a better predictor of child outcomes than the number of moves. For older children, Weber and Weber (2005) found that parents perceived moving to be increasingly a positive experience, and therefore adolescent behavior improved the more moves a family made.

The rank of the service member was also found to potentially increase the risk of poor school performance (Lleras & McKillip, 2016). A qualitative study by Lyle (2006) analyzed data from the Texas Assessment of Academic Skills for 13,000 military students aged 6–19 years and found that mobility had a modest negative effect on test scores for children from families of enlisted service members and showed no impact on officers' children, due to discrepancies in household income and parental education. As in the literature addressing other factors in this study, the risk for poor school readiness or educational achievement is elevated for children of enlisted service members compared to officers' children (Flake et al., 2009; Green et al., 2013; Lester et al., 2016).

Deployment

Deployments, during peacetime and war, require lengthy separations between service members and their families (Engel, Gallagher, & Lyle, 2010). While deployments are an inevitable part of life for military families, the engagement of the United States in the longest war in our nation's history intensified the hardships experienced by these families (Lester et al., 2010). After Operation Enduring Freedom commenced in Afghanistan in 2001 and Operation Iraqi Freedom began in 2003, deployment frequency increased, shortening service members' time at home relative to time spent deployed (Lester et al., 2010). While military operations have declined since 2011, service members continue to deploy regularly.

Empirical research on the effects of deployments on military children has mainly focused on school-aged children, neglecting children under 5 years of age (Barker & Berry, 2009; Chartrand et al., 2008; Lester et al., 2016). For instance, in a meta-analysis of 16 studies on deployment and military children, Card et al. (2011) found that limited literature on early

childhood was an impediment to investigating this age group. Further critiquing studies on military children and deployment, Card et al. found that small samples, overuse of convenience or snowball sampling, irregular operationalization of deployment, failure to collect data on rank, age, deployment history, inconsistent control groups, and the collection of data in different phases of the deployment cycle were problematic across the literature. This appraisal of deployment studies suggests a cautionary reading of their methodology, operationalization of variables, and data collection.

Deployment frequency and duration. A consequence of extended military operations for military families has been the increase in duration and frequency of deployments. The longer a service member is deployed, and the more deployments his or her family experiences over time, the greater the risk of marital problems, depression in parents and children, and behavioral problems in children (Barker & Berry, 2009; Lester et al., 2016; Lester et al., 2010). In a quantitative study utilizing focus groups and semistructured interviews, Chandra et al. (2010) explored the perspectives of 148 teachers, counselors, and administrators on student social and emotional functioning due to multiple parental deployments. Staff in elementary, middle, and high schools with many U.S. Army children found that the "resiliency in the family has been used up" (Chandra et al., 2010, p. 4) across repeated deployments, negatively impacting children's social and emotional well-being.

Surveying 57 active-duty families with children aged 5 years or under during and after a deployment, Barker and Berry (2009) also found that duration and frequency of deployment are positively associated with behavioral problems, including need for attention, clinginess, and tantrums. Similarly, Lester et al. (2016) found that an increase in deployment experiences damages family functioning, marital stability, parenting sensitivity, and primary caregiver health, which endangers the social-emotional well-being of young children as exhibited through anxiety or behavior problems.

Moreover, deployment experiences are not limited to the time a service member is gone. Predeployment and reintegration, the phases before and following a deployment, present challenges for families. Examining young children's behaviors during and after a deployment, Barker and Berry (2009) found increased problems in both phases. Chandra et al. (2010) reported that kindergarten through 12th-grade students experienced stress during and after deployment. Furthermore, Waliski et al. (2012) found the reintegration period a more challenging time for family than the actual separation.

Children aged 0–3 years. Deployments have been found to negatively impact the well-being of children aged 0–5 years (Barker & Berry, 2009; Chandra et al., 2010; Gorman, Eide, & Hisle-Gorman, 2010; Waliski et al., 2012). For children under 3 years of age, establishing an attachment relationship during a deployment is a primary concern (Flake et al., 2009; Hisle-Gorman et al., 2015; Lester et al., 2010; Waliski et al., 2012). Without a secure attachment, children can experience persistent anxiety or stress that can have long-term developmental consequences: Their ability to learn is jeopardized, as is their physical and mental health (Lester et al., 2016; Schmitt et al., 2015; Waliski et al., 2012). In a cross-sectional study of 169 children at the CDC on Marine Corps Camp Pendleton, California, Chartrand et al. (2008) administered the Child Behavior Checklist to parents and caregivers of 310 children. Additionally, parents completed the Parenting Stress Index—Short Form and the Center for Epidemiological Studies Depression Screener once during the deployment. The researchers performed *t* tests and linear regression analysis of children with deployed and nondeployed parents and found those aged 1.5–3 years had lower externalizing behaviors during the deployment than children aged 3–5 years. The authors posit that the attachment relationship with the primary caregiver for a child aged 35 months or younger is most predictive of the child's response to a parent's absence. Children of this age were less aware of the deployed parent being gone and fared well as long as their primary caregivers were still present and provided secure attachment relationships. A

limitation of this study is the focus on child behavior only during a deployment, rather than before or after a deployment or longitudinally over the course of multiple deployments.

Children aged 3–5 years. Chartrand et al. (2008) found that by the age of 3 years, children of deployed service members were more aware of parental absence and the well-being of the primary caregiving parent. As a result, deployments caused increased negative internal and external behaviors for children aged 3–5 years. External behaviors included a greater need for attention, tantrums, crying, defiance, aggression, attention difficulties, and regression in eating, sleeping, and toileting patterns (Barker & Berry, 2009; Lester et al., 2016; Waliski et al., 2012). Internalized behaviors, such as anxiety, separation anxiety, stress, depression or distress, and withdrawal, were also more prevalent during a deployment cycle (Chartrand et al., 2008; Gorman et al., 2010; Lester et al., 2016; Waliski et al., 2012).

Examining the impact of deployment on the health and safety of military children aged 3–8 years, Hisle-Gorman et al. (2015) analyzed military health-care data for 487,460 children from 2006 to 2007. Those children who experienced a deployment during this period had more mental health, injury, and child maltreatment medical visits after the deployment than children of nondeployed service members. While the average military child's risk for mental health disorders does not typically exceed community norms, the authors presented the potential psychological and physical health hazards of deployment for young military children (Chandra et al., 2010).

Military children at risk. As with findings on relocation, research unanimously points to the health and emotional well-being of the primary caregiving parent as the primary influence on a child's deployment experience (Barker & Berry, 2009; Chandra et al., 2010; Chartrand et al., 2008; Hisle-Gorman et al., 2015; Lester et al., 2010; Waliski et al., 2012). Understood through the family systems perspective, development of a young child experiencing deployment is at risk due to the heightened likelihood that the at-home caregiving parent will more experience stress, depression, anxiety, and other mental health issues, compared to community norms, during

deployment (Green et al., 2013; Lester et al., 2016; Lester et al., 2010; Waliski et al., 2012). However, children of enlisted service members may be more likely to experience difficulties during a deployment. Families of enlisted personnel, in which parents are characterized by youth, short marriage length, low income, and poor educational attainment, are at higher risk than those of officers for depression, marriage problems, insensitive parenting, and poor family processes during a deployment (Flake et al., 2009; Lester et al., 2016). Nevertheless, Card et al. (2011) and Lester et al. (2016) call for further research on the differences between enlisted and officer deployment experiences in light of inconsistent data on rank in the existing literature.

Primary Caregiving Parent

The psychological health of the primary caregiving parent is consequential for the entire family system. According to the family systems perspective, when one member experiences difficulties, the entire family is impacted (Paley et al., 2013; Saltzman, Lester, Milburn, Woodward, & Stein, 2016; Walsh, 2012). In military families, the health of the primary caregiving parent, who is most commonly a civilian mother, has a disproportionate impact on the family system. The primary caregiving parent is often responsible for providing the majority of the physical and emotional care necessary for a child's health, development, and school readiness. However, this parent's vulnerable psychological health jeopardizes his or her ability to provide care for others (Eaton et al., 2008; Green et al., 2013; Harmeyer et al., 2016; Hur et al., 2015; Kelley et al., 2003; Lester et al., 2010; Mansfield et al., 2010; Okado et al., 2014; Waliski et al., 2012). Studies on both civilian and military families find increased risks for anxiety, depression, stress, and external or internal behavior problems in children with psychologically unhealthy parents (Green et al., 2013; Hur et al., 2015; Lester et al., 2010; Waliski et al., 2012).

The primary caregiving parent's risk of experiencing high levels of stress, anxiety, depression, or other mental health issues is elevated due to the accumulation of military life hardships, including deployments, relocation, distance from extended family, unemployment, and fear for the safety of the service member (Green et al., 2013; Lester et al., 2016; Waliski et

al., 2012). As a result, relationships are weakened, making the family less equipped to provide sensitive and responsive parenting and a structured home environment and to capitalize on educational opportunities for young children in the family (Harmeyer et al., 2016; Hur et al., 2015; Okado et al., 2014). Moreover, the primary caretaking parent's health can also erode the readiness of the service member by directing focus from work to family concerns (Eaton et al., 2008; Green et al., 2013). Military retention decisions are also influenced by military family resiliency, or the capacity of the spouse and family to cope with military life stressors (Eaton et al., 2008; Green et al., 2013; Walsh, 2012).

To measure the prevalence of military spouse depression and anxiety, Eaton et al. (2008) surveyed 940 active-duty Army spouses in 2003 using the self-administered Patient Health Questionnaire. Recruited at on-post primary care clinics, 78% of respondents had spouses currently deployed in Iraq or Afghanistan. The authors found almost 20% of spouses met the broad screening definition of depression or anxiety from the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.), which was equivalent to rates for returning service members. Also, military spouses were less concerned about the stigma of seeking mental health care than service members and were more likely to utilize services. Research conducted 2 years later by Mansfield et al. (2010) and published in *The New England Journal of Medicine* came to similar conclusions. The authors used medical record data from 2003 to 2006 for 250,626 active-duty Army spouses to determine the effect of duration of deployment on mental health diagnoses. The study found the use of mental health services for spouses experiencing a deployment ranging from 1 to 11 months was 20% higher compared to spouses of nondeployed service members. For spouses experiencing a deployment over 11 months, the use of mental health services was 27% higher than among the control group. Depression, anxiety, sleep disorders, acute stress reactions, and adjustment disorders (possibly attributed to fear of the service member's safety), increased household and parenting responsibilities, and marital strain were the most common diagnoses. Unlike Eaton et al., Mansfield et al. hypothesized that the stigma against seeking mental health

care by service members was also likely held by spouses, potentially causing this study to underestimate the number of spouses needing mental health services.

However, not all military spouses are equally at risk for mental health problems. Green et al. (2013) conducted 161 interviews to measure variables including social support, family stress and strain, and socioeconomics for their study on the psychological well-being of military spouses. Utilizing regression analysis, the study concluded that military spouses with fewer socioeconomic resources, lower educational attainment, younger age at birth of the first child, and less social support were more likely than others to suffer from stress and behavioral health issues. Green et al.'s and Flake et al.'s (2009) demographic descriptors of an at-risk population indicate that spouses of enlisted service members are at higher risk than officers' spouses of psychological distress. Lester et al.'s (2016) study also supports this conclusion: Primary caregiving parents in families of enlisted service members are at risk for mental health issues, especially during a deployment.

As a result of poor maternal health, the health of military children is threatened (Green et al., 2013; Hur et al., 2015; Lester et al., 2010; Waliski et al., 2012). To determine predictors for psychosocial morbidity during a deployment, Flake et al. (2009) surveyed 116 Army spouses and children aged 5–12 years from families with a deployed service member. The Pediatric Symptom Checklist, Parenting Stress Index—Short Form, and Perceived Stress Scale revealed high stress in parents was associated with increased internal and external behavioral problems in their children. Parents with greater educational attainment and strong social support were less stressed, and their children were at lower risk for behavioral health difficulties. However, young parents with short marriages, low socioeconomic status, and weak social support had elevated risks for parental stress and psychosocial morbidity among their children.

Military Family

According to the family systems perspective, the health of the family is dependent on the well-being of all individuals and relationships (Paley et al., 2013; Walsh, 2012). When parents

and children are healthy, and marriages and parent–child relationships exhibit cohesiveness, clear communication, and problem-solving capabilities, children are more likely to develop essential school readiness skills (Harmeyer et al., 2016; Kelley et al., 2003; Mistry, Benner, Biesanz, Clark, & Howes, 2016). However, for military families, maintaining parent–child relationships and marriage stability is challenging.

The parent–child relationship is imperative for the cognitive and social development of young children (Harmeyer et al., 2016; Lester et al., 2016; Mistry et al., 2016; Nelson & Schutz, 2007; Okado et al., 2014; Waliski et al., 2012). However, interactive, sensitive, and responsive parenting as well as cognitive stimulation and language and literacy exposure—all of which bolster school readiness—are less likely during periods of parental stress or poor mental health (Flake et al., 2009; Harmeyer et al., 2016; Lester et al., 2016; Mistry et al., 2016; Waliski et al., 2012). For instance, using the same low-income civilian sample from the National Early Head Start Research and Evaluation Project in 2002, Mistry et al. (2016) and Harmeyer et al. (2016) found that parenting is compromised by stress and hardship, and the strained parent–child interactions that result indirectly undermine a young child's school readiness. According to Mistry et al., families with unmet needs due to economic difficulties provide less cognitive stimulation and sensitive and responsive parenting. While preschool-aged children are susceptible to adversity, Mistry et al. found the first year of life is when children are most vulnerable to family hardship. The longitudinal examination by Harmeyer et al. also considered the impact of maternal stress on a child's development from birth to kindergarten. The study found parenting stress at 15-months old was predictive of mother–child closeness at 25-months old, which forecast vocabulary and early academic skills upon kindergarten entry. Harmeyer et al. concluded that parental stress leads to parenting behavior that does not optimize child outcomes. Mistry et al. and Harmeyer et al. established the importance of early parent–child relationships for the future development of school readiness skills. Similarly, in a study of military families, Lester et al. (2016) examined the relationship between child social-emotional adjustment and parental sensitivity, or a parent's response to his or her child's emotions, during a

deployment. Data from phone interviews, online surveys, and the Department of Defense for 680 primary caregiving parents and 310 service member parents of children aged 0–10 years were collected. Linear and logistic regression analyzed information on a child's social-emotional development, measured by the Ages and Stages Questionnaire: Social-Emotional, and parent sensitivity, using the Parent Behavior with Preschooler Sort. Researchers found higher parental sensitivity resulted in fewer social-emotional problems for children aged 0–5 years during a deployment. Additionally, low sensitivity in parent–child interactions was predictive of higher child anxiety for those aged 3–5 years. A limitation of this study is that it fails to collect data longitudinally to provide more information about the longer-term effects of parent–child interactions.

The marriage relationship is also central to military child well-being and adjustment (Kelley et al., 2003; Lester et al., 2016; Waliski et al., 2012). Military marriages experience unique difficulties, including the accumulation of time spent apart due to deployments and stress from relocation or other events related to military life (Kelley et al., 2003; Lester et al., 2016). Enlisted service members have a higher likelihood than officers of experiencing marital strain, possibly attributable to their typically short length of marriage or youth (Flake et al., 2009; Lester et al., 2016). A strained marriage may compromise the ability of parents to provide a safe, structured, and disciplined home environment enriched with language and literacy exposure, out-of-home experiences, and developmentally appropriate toys, materials, and activities, all of which contribute positively to school readiness (Hur et al., 2015; Mistry et al., 2016). In a study of 444 families with preschool-aged children, Hur et al. (2015) found children living in chaotic homes exhibited lower cognitive skills, less developed social-emotional skills, and poorer self-regulation of behavior than other children. While household chaos was predictive of poor school readiness, Hur et al. also found a correlation between parental depression and chaotic households. In sum, a strained marriage negatively impacts the functioning of the entire family system, which has consequences for a child's development.

Military Support Programs

Military families benefit from both informal and formal support networks and programs that buffer ill effects of military life, such as deployments and relocations (Augustine et al. 2009; Barker & Berry, 2009; Flake et al., 2009; Green et al., 2013; Waliski et al., 2012). In fact, social support for military families can reduce stress, build social capital, and improve mental health, family adjustment, and child outcomes, including school readiness (Barker & Berry, 2009; Flake et al., 2009; Green et al., 2013; Waliski et al., 2012). Social support can also bolster resiliency, or the ability of an individual or family to manage and overcome stressful circumstances (Walsh, 2012). Military support programs are examples of entities beyond the family, or the microsystem, that impact the school readiness of a military child. For instance, policies and funding for military family support programming, determined in the macrosystem (e.g., Marine Corps headquarters), have significant ramifications for the well-being of a military family.

Childcare is an example of a military support program that has greatly impacted families. In response to the growing child care needs of service members, Congress passed the Military Child Care Act of 1989, which increased the availability of safe, high-quality early childhood education for military children (Floyd & Phillips, 2013). As a result, military families today have access to nationally accredited, cost-subsidized CDCs and family child care or certified child care homes (Floyd & Phillips, 2013). Military child care, which prioritizes staff training, safety, quality, and affordability, is considered a model of early childhood education for the nation (Floyd & Phillips, 2013).

While the Department of Defense's child care programs are of excellent quality, they do not meet the diverse needs of all military families due to (for instance) affordability, location, and hours of care (Floyd & Phillips, 2013). Also, demand outweighs supply at many centers (Floyd & Phillips, 2013). As a result, when the military child care centers are fully enrolled, families rely on military home child care, if available, or public or private programs in the community. In 2011, acknowledging access, availability, and affordability concerns, President

Obama made increasing quality and availability of early childhood education for military children one of his top four priorities in supporting military families (The White House, 2011).

In the period of prolonged conflict following the attacks of September 11, 2001, advocacy organizations and the Department of Defense significantly expanded other programming intending to assist military families during wartime (Lester et al., 2012). National organizations, including the Military Child Education Coalition, Zero to Three, and Sesame Street, became increasingly engaged in issues faced by military children. Programs funded and administered by the military were also expanded, and new ones were founded. Examples of Marine Corps resources include the New Parent Support Program, whose social workers and nurses provide parenting classes, support groups, and home visits to parents of children under 5 years of age, and the Family Readiness Program, which provides resource referrals and deployment support. However well-intentioned, most military support programs designed to improve family outcomes lack empirical evaluation and, therefore, have unverified impacts (Lester et al., 2012).

The U.S. Marine Corps SLP and Families OverComing Under Stress (FOCUS) are exceptions: Both have undergone systematic review by civilian researchers and have been evaluated positively (Aronson et al., 2011; Lester et al., 2012). The SLP supports school transitions for kindergarten through 12th-grade students at every Marine Corps installation. In Aronson et al.'s (2011) qualitative study, interviews of twenty school liaison officers suggested that the SLP was improving military student transitions by assisting individual families and advocating for issues relevant to military children in kindergarten through 12th grade with local school districts and other stakeholders. However, Aronson et al. found that school liaison officers encountered local school rules and regulations unfavorable to military students and identified the need to educate civilian stakeholders on military culture and lifestyle to increase understanding. While the SLP provides necessary support for school-aged children, there is no equivalent program for families with children under the age of 5 years seeking school readiness opportunities.

FOCUS is a family-centered program adopted by the Marine Corps that was developed to improve family resiliency by researchers from the University of California, Los Angeles, and Harvard University (Lester et al., 2012). Data collected at 11 FOCUS program sites from 2008 to 2011 by Lester et al. (2012) included results from the Parent Brief Symptom Inventory, which measured parental distress, and the Kidcope measure on child coping skills. The study concluded that FOCUS decreased the stress of both parents, thereby improving family processes, including communication and routines. Improved family functioning resulted in improved social and coping skills of children, including those under 5 years of age. While SLP and FOCUS have undergone empirical review, further investigation into the effectiveness of other military programs and resources designed to support the families of young military children is necessary (Lester et al., 2012).

Local School Readiness Resources

The provision of early childhood education involves a complicated network of private programs, informal care, and public programs funded at the federal, state, and local levels. Civilian and military families alike struggle to navigate this complex landscape; however, it is especially difficult for military families stationed in new and unfamiliar communities. If military families do not elect to enroll in military-sponsored early childhood education programs, they have the option of pursuing public programs or private preschools. Head Start and preschool programs run by local school districts are sometimes available to military families. However, eligibility rules vary by state. For example, 33 states have income requirements for enrollment in public programs, although states including North Carolina and Texas have waived this income requirement for military children (Barnett et al., 2016). However, eligibility does not guarantee enrollment for military children, due to capacity constraints. If the number of eligible students exceeds availability, which is extremely common in most states, localities may prioritize the neediest families, which may not favor military children due to typical household income (North Carolina Division of Child Development and Early Education, 2016).

Information on the quality of private school readiness programs is often unavailable or inadequate (Glenn-Applegate et al., 2016). For example, Arizona's Quality First program rates programs for parents according to quality on a scale from 1 to 5 stars (5 indicates the highest quality). However, Quality First is voluntary for school readiness programs, and capacity is limited. The narrow reach of this program is evident from this 2013 statistic: Only 9% of Arizona children were enrolled in an early childhood education program with a quality rating of 3–5 stars (First Things First, 2015). Without quality data, including information on teacher–child ratios, classroom environment, safety, and relationships with caregivers, parents attempt to rate programs themselves (Augustine et al., 2009; McWayne et al., 2012). However, they often overestimate quality and prioritize personal preferences, such as cost and convenience, rather than evaluate a program according to research-based quality measures (Glenn-Applegate et al., 2016; Kim & Fram, 2016). Even if military families can assess a program's quality according to expert criteria, there is a possibility that high-quality programs do not exist, are not accessible, or have no capacity at their duty station. As a result, military families enroll in programs with uncertain school readiness outcomes (Glenn-Applegate et al., 2016).

In addition to early childhood education, programs that provide parenting education, health and nutrition assistance, and literacy promotion—for example—are also vital to improving school readiness. Several states, including Arizona, have statewide organizations that support school readiness through the funding of early childhood initiatives. For example, Arizona's First Things First, funded through a state cigarette tax, is a public institution that seeks to improve the state's early childhood system through investment in developmental, health, and educational programs (First Things First, 2017). The board of directors leads 28 regional councils comprised of volunteer parents, educators, business leaders, tribal representatives, and health professionals (First Things First, 2017). These local councils are tasked with awarding competitive grants to government entities, tribal governments, colleges and universities, nonprofit organizations, and businesses that propose services that align with both state and local early childhood goals.

Conclusion

Several themes emerged from the synthesis of the literature on school readiness for military children. First, the primary caretaking parent has a disproportionate influence on the development of a military child and plays the most significant role in preparing the child for kindergarten (Lester et al., 2016). Furthermore, children from families of enlisted service members, the majority subpopulation within the military community, were identified as at high risk of low school readiness according to their demographic profile and in comparison to children from officers' families (Flake et al., 2009; Green et al., 2013; Lester et al., 2016; Lyle, 2006).

The literature also suggests that preparing children for today's academically rigorous kindergartens will require increasing access to high-quality school readiness programs. However, military families have difficulty identifying, affording, and accessing high-quality programs (Glenn-Applegate et al., 2016; Lester et al., 2012). In light of these findings, the needs assessment described in Chapter 2 empirically examined stakeholder perceptions of school readiness, the health and well-being of military families and primary caregiving parents, the influence of military life on a child's school readiness, and the availability of local and military school readiness resources in the context of MCAS Yuma.

Chapter 2: Needs Assessment

This chapter describes the methodology and findings of the needs assessment designed to answer four research questions inspired by the conceptual framework of this study. The needs assessment investigated the prevalence of six factors (deployments, relocation, the primary caregiving parent, the military family system, military resources, and local community resources) identified in the research in the context of MCAS Yuma. More specifically, the study sought to ascertain how the local context, the distinctive demographic profile of military families, and the military lifestyle influenced the school readiness of military children. Establishing whether military families have unmet school readiness needs and gauging the effectiveness of military and local systems intended to help young military children stationed at Yuma was also a goal.

Context of Study

Located in the southwest corner of Arizona, bordering Mexico and California, Yuma County has a population of approximately 196,000, half of whose primary language is not English (First Things First, Yuma Regional Partnership Council, 2016; Yuma Chamber of Commerce, 2020). After agriculture, the military is the second largest industry in Yuma County, with both MCAS Yuma and the U.S. Army's Yuma Proving Ground located within the county lines (Yuma County Chamber of Commerce, 2020). There are 3,917 active-duty marines stationed at MCAS Yuma along with 3,711 family members within 50 miles of the base (Headquarters Marine Corps, Marine and Family Services, 2016). Units include a combination of deployable aviation units, such as AV-8B Harrier and F-35 Joint Strike Fighter squadrons, and the aviation training command Marine Aviation Weapons and Tactics Squadron One. Marines from MCAS Yuma deploy frequently and have a demanding training schedule when at home, which presents challenges for their families.

Isolated by the Sonoran Desert, Yuma's location impacts the school readiness opportunities for military children. Specialized medical care and other resources for children are limited, so military families must travel to San Diego, California, or Phoenix, Arizona, both

approximately 180 miles away, to seek services such as child psychology. Furthermore, Yuma's population has many low-income households, and about half of children under the age of 4 years in Yuma County live at or below 185% of the federal poverty line (First Things First, Yuma Regional Partnership Council, 2016). Also, only 39% of children attend preschool (First Things First, Yuma Regional Partnership Council, 2016). The inability of families to pay for their children's early education, coupled with limited state and local public funding for early childhood programming, has constrained the availability of, and accessibility to, high-quality school readiness opportunities. These challenges within the local community affect the education of young military and local children alike.

Statement of Purpose

The purpose of this study is to investigate how military families with children under 5 years of age stationed at MCAS Yuma prepare their children for kindergarten. The four research themes guiding this inquiry include perceptions of school readiness, school readiness resources, military life, and military families (Appendix A). There are four corresponding research questions, as follows.

RQ1: How do stakeholders perceive the importance of preparing young children for kindergarten?

RQ2: What high-quality public, private, and military-sponsored school readiness resources are accessible to military children?

RQ3: How does the military lifestyle, especially deployments and relocations, impact school readiness for military children?

RQ4: In what ways does the military family impact the school readiness of their children?

In this study, a military family includes the spouse and children aged under 18 years of an active-duty member of the Marine Corps, Army, Navy, Air Force, or Coast Guard. A military child in this study could have one or both parents who are active-duty service members. The primary caregiving parent in this investigation is the spouse of a service member who provides

the majority of care for the family's children. Typically, this parent is the mother, but the primary caregiving spouse may also be the father. The primary caregiving parent is commonly a civilian, but in the case of a dual active-duty family, the primary caregiving parent may also be a service member.

The military lifestyle is understood to entail frequent relocations, deployments, and separations. Relocation occurs when a service member receives military orders to transfer to a new duty station with his or her family, either domestically or internationally. When a service member is relocated without his or her family for several consecutive months (e.g., 6–12 months) to carry out military duties they are deployed. A separation occurs when work obligations take a service member away from their his or her family for days, weeks, or a limited number of months (e.g., 1–5 months).

School readiness occurs when competencies needed for kindergarten, including social-emotional skills, language and early literacy skills, cognitive skills, physical development and health, and positive approaches to learning, have been developed by kindergarten entry. For this study, and according to the literature review, risk factors that contribute to poor school readiness include low income, poor parenting practices, low-quality home environment, minority status, low maternal education, poor maternal health and well-being, little social support, and youth. Finally, an enriched home environment is a physically and emotionally safe space with developmentally appropriate toys and materials in which a consistent caregiver provides routines and structure, positive interactions, activities, and out-of-home experiences and regularly reads to the child. Next, the needs assessment research design, including participants, measures, instrumentation, data collection, and analysis, are presented.

Research Design

An embedded mixed methods research design, in which the quantitative data set serves to further the findings of the more significant qualitative data set, was selected for this needs assessment (Creswell & Clark, 2007; Schutt, 2015). Stakeholder interviews produced qualitative

data, and a demographic survey administered only to military parents provided quantitative data intended to deepen qualitative findings. Several strategies were utilized to improve the trustworthiness of this needs assessment. A dense description of participants, context, and methods, code-recoding, and triangulation of data improved dependability (Krefting, 1991). The selection of participants considered credible by their peers and member checking of data to ensure accuracy improved credibility (Krefting, 1991; Schutt, 2015).

Participants

Participants ($N = 12$) included the MCAS Yuma school liaison, the MCAS Yuma family care manager, two military family life consultants, a Yuma District One military advocate, the MCAS Yuma behavioral health community counseling child therapist, the Yuma District One preschool coordinator, a kindergarten teacher at a local private school, the Marine Corps headquarters SLP manager, the chairwoman of Military Families for High Standards, and two primary caregiving parents. Two participants were men, and 10 were women. All except two participants lived in Yuma, Arizona; the other two resided in the Washington, DC, area. Each of the military parents was a spouse of an active-duty marine, a mother of a preschooler enrolled at the MCAS Yuma CDC, and aged under age 25 years when her first child was born. One was the spouse of an enlisted marine, was a current college student, and had experienced one relocation, two deployments, and 12 separations longer than 2 weeks. The other was the spouse of an officer, was a college graduate, worked 20–30 hr per week, had relocated with her family four times since having children, and had experienced one deployment and 15 separations longer than 2 weeks.

Measures

The construct of school readiness was evaluated according to four relevant variables: school readiness perceptions, the intersection of school readiness and military life, school readiness resources available to military families, and the impact of the military family system on school readiness (O'Leary, 2014; Appendix A). The researcher created customized interview

protocols for military support program staff, local community program staff, military parents, and representatives of national organizations that each address these four variables (Appendix B). For example, interview questions directed at local school readiness program staff included, "How does your program assist military families with young children, aged zero to five?" (Appendix B). A researcher-developed demographic survey was also given to the parent participants only (Appendix C). Survey questions included, "Since your first child was born, how many times have you moved to a new duty station?" (Appendix C). For further detail, Appendix A further defines each variable and provides corresponding research questions, interview questions, and codes.

Instrumentation

Two instruments were used to collect needs assessment data: semiformal interviews and a demographic survey (Appendices B and C).

School readiness interviews. Interviews were the primary source of needs assessment data (Appendix B). The purpose of the interviews was to solicit information on school preparation for military children from the perspectives of various stakeholders. Interview questions were developed explicitly for four categories of participants: military support programs, local community programs, military parents, and national organizations (Appendix B). For participants from military support and local community programs, questions focused on the school readiness services they offer to military families, the challenges they observe military families facing when preparing their children for kindergarten, and the subgroups within the military community that struggle most acutely with school readiness. Interview questions for national organizations addressed trends in programming, policy priorities, and funding. Parents, on the other hand, were interviewed as consumers of these programs, services, and policies. Their perspective on military life's impact on the school readiness of their children, particularly while stationed at MCAS Yuma, was explored.

Military family demographic survey. A demographic survey for parents was administered online with Qualtrics (Appendix C). The purpose of this survey was to gather information on parent experiences and demographics. Participants were asked about their parenting responsibilities, their employment status, the age of their children, and the frequency of their relocations, deployments, and other separations. The demographic survey also collected data on parent educational attainment, race and ethnicity, and military rank.

Procedure

Procedures to collect and analyze data are described in this section.

Data collection. The embedded mixed methods needs assessment was conducted from February to April 2017. Each participant engaged in a semistructured one-on-one interview scheduled at the convenience of the interviewee. Before the meeting took place, the researcher e-mailed the consent form to the participant and ensured it was signed and returned before the interview (Appendix D). Also, before their interviews, the two military parent participants completed a short online demographic survey. One interview took place in person, but the other 11 conversations were over the phone and recorded using the TapeACall app. The discussion began with the researcher introducing herself and explaining the purpose of the study and the rights of the participant while developing a rapport with the interviewee. The average length of interview was 40 min. After the interview, the researcher reflected upon the content of the discussion and considered the credibility or biases of the participant in a field journal.

The recruitment of participants ($N = 12$) was accomplished using several methods. First, the MCAS Yuma school liaison, who also served as the executive sponsor of this study, was consulted. As a key informant, the school liaison used judgment sampling to suggest local stakeholders based on experience and knowledge of early childhood education or military children in the local context (Soriano, 2013). Second, snowball sampling was used to identify parents from families of both enlisted marines and officers (Soriano, 2013). Third, the chairwoman of Military Families for High Standards was identified by the researcher as a

knowledgeable stakeholder. The researcher contacted her through e-mail, and the chairwoman accepted the invitation to participate in this study.

Data analysis. Deductive and inductive analysis was utilized to interpret data from interviews and the military family demographic survey. First, according to the structural coding method, codes were predetermined from findings in the literature, the conceptual framework, and according to the two theoretical frameworks guiding this study: the family systems perspective and the ecological systems theory (Bronfenbrenner & Morris, 2006; Cox & Paley, 1997; Saldana, 2016). "Private preschools" and "mental health" are examples of codes identified before research commenced. However, additional codes, such as "young parents" and "cultural perspective," emerged as participants introduced new ideas during their interviews or surveys (O'Leary, 2014; Saldana, 2016).

To code the data, the researcher reviewed the interviews, identified segments of responses that addressed a particular topic, and assigned corresponding codes to those segments. Coded data were then categorized into the four research themes of perceptions of school readiness, school readiness resources, military life, and military families. Lastly, similarities, differences, and relationships between the data were analyzed. Appendix A provides detailed information on interview themes, research and interview questions, and codes.

Findings

Results from 12 interviews and two demographic surveys addressing the four research questions are discussed in this section.

Perceptions of School Readiness

The first research question asked how participants perceive the importance of preparing young military children for kindergarten. Several participants shared their perceptions of the military's view on the education of military children. Participant B (interview, April 7, 2017) thought that the military recognizes military child education as "a readiness and retention issue" and a factor in force readiness. For instance, when families are not adequately prepared or

provided for at home, the ability of service members to focus on and achieve their missions is jeopardized. Participant C explained, "In order for the servicemen to be happy and to feel secure and do what they need to do with their job, the families have to be taken care of" (interview, April 6, 2017). Also, service members' decisions to join, reenlist, retire, or accept assignments at particular duty stations are correlated to the availability of high-quality educational opportunities for their children: "If a service member is being told they are going to a poor school district at a new location, they might retire or be a geo-bachelor" (Participant B, interview, April 7, 2017; a geo-bachelor is a service member who moves to a new duty station without his or her family).

Ultimately, with the varying quality of educational opportunities at different installations, many military families are making trade-offs between service members' careers and the education of their children (Participant A, interview, April 20, 2017). For instance, Participant E stated, "Our number one concern about coming to Yuma was the education system" (interview, April 21, 2017). Another interviewee shared, "military parents are concerned about the quality of school since there is not the best reputation in Yuma. They worry if their child will be prepared when they move and go to a better school district" (Participant D, interview, April 20, 2017). Despite such concerns, these military families still relocated to Yuma to further their service members' careers.

While military "leadership has made it clear that a priority . . . is the education of military children" (Participant A, interview, April 20, 2017), the focus of their efforts has been on students in kindergarten through 12th grade, not children under the age of 5 years. The exception is the Department of Defense's significant investment in high-quality CDCs, but "their purpose is to support employment not necessarily early childhood education" (Participant A, e-mail, March 2, 2017). The following quote is illustrative of the prioritization of kindergarten through 12th grade over early childhood education: "Given that early childhood education can be seen as an option by many rather than a need, it has made the exploration of strengths and weaknesses in preparation for school readiness tough" (Participant A, e-mail, March 2, 2017).

Military child advocacy groups have also focused on school-aged children over the last several years. A recent success for these groups was the passage of the military identifier. Mandated by the Every Student Succeeds Act, the military identifier requires school districts to identify military students and track their school performance as they relocate to new school districts (Participant A, interview, April 20, 2017). However, kindergarten readiness data is frequently either not collected or not reported, so this tool currently has limited ability for exploring the school readiness of military children (Participant A, e-mail, March 2, 2017). In regard to collecting data on kindergarten-aged or younger military children, "you may meet with frustration. It has taken years for all of those involved with the education of military children to convince districts and legislators to track military students" (Participant A, e-mail, March 2, 2017). While some states and districts are behind in fulfilling this obligation, Yuma District One (one of two elementary school districts in Yuma County) already has a military identifier on its new student enrollment packets. The district has plans to start collecting school readiness data on rising kindergartners for all of its students (e.g., whether they attended preschool and where; Participant H, interview, April 21, 2017).

Professionals working directly with military families observed that most parents valued early education. However, these observations only accounted for families that took advantage of resources. One participant had worked with a few military families that seemed not to prioritize their child's education, judging by the parents' failure to access programs or services (Participant K, interview, April 9, 2017). On the other hand, parents who attended story hour at the base library or enrolled their children at the CDC appeared especially involved in their children's education, according to Participants C and D:

> I do notice that those families who take them to the CDC or childcare are amenable to the child's development . . . they are really looking into making sure that they are successful and they want to know why if they are not. I have yet to see any parents that don't want their children to be successful. (Participant C, interview, April 6, 2017)

This passage shows that most military families prioritize their young children's education.

When military children did reach kindergarten, participants had varied perceptions of their readiness. Participant J, who frequently interacts with teachers, noted having never heard kindergarten teachers complaining that military children were not prepared. Instead, she was told that they were ready academically, listened well, were respectful, and had well-developed social-emotional skills. A kindergarten teacher at a private school in Yuma experienced in working with military children said that they were generally "well adjusted, not clingy, and usually on the higher end in being prepared" (Participant D, interview, April 20, 2017). On the other hand, Participant F observed that military kindergarteners struggled more academically than socially. Worth exploring is the lens through which teachers and professionals in this community gauge school readiness and kindergarten performance among military children. They compare military students to those from the local population, who are known to struggle in preparation for kindergarten, rather than to national benchmarks. This comparison may distort their assessment of the school readiness of military children by overstating their kindergarten preparation and performance. Participants raised no concerns about kindergarten transitions for military children, but when they enroll there "is difficulty identifying who is military. We are not always informed about PCSs or deployments either" (Participant K, interview, April 9, 2017). While military status is collected in registration packets, it seems that this information does not consistently reach teachers and support staff.

School Readiness Resources

Several participants addressed the affordability, quality, and accessibility of both local and military early childhood opportunities in Yuma (Participants B, D, E, F, H, I, and J). First, the affordability of enrolling children in a school readiness program is a concern for many military families. Exacerbated by high unemployment and underemployment rates among military spouses, preschool tuition places a strain on family budgets. However, even if military spouses can find employment, some families still face financial and logistical obstacles to sending their children to preschool (Participant E, interview, April 21, 2017). For instance,

civilian military spouses need to earn enough to cover the cost of a school readiness program as well as any additional hours of child care required while managing their work and home responsibilities, often without the support of their active-duty spouses. A military parent interviewed recounted her friend's experience seeking employment as a substitute teacher (Participant E, interview, April 21, 2017). Although the military spouse held a master's degree in education, after factoring in the cost of child care, she would make only $10 per day substitute teaching. Faced with similar constraints, military spouses often decide the amount of money earned after paying for child care is not worth leaving their child in the care of others. The following narrative further illustrates this dilemma faced by military families:

> For military families, the cost of early childhood education from zero to five is often not within reach, and the availability is scattered and not very consistent. I think military families feel a push to keep their kids at home because they have so many other inconsistencies in life. (Participant E, interview, April 21, 2017)

This passage indicates that decisions to enroll military children in school readiness programs are multifaceted. For some military families that opt not to send their children to preschool, homeschooling has become a popular option for children of all ages (Participant J, interview, February 1, 2017).

In Yuma, there are over 20 private school readiness programs (Participant J, interview, February 1, 2017). To assess the quality of programs, military parents use word-of-mouth recommendations (Participants D, E, I, and J). Many parents network with friends and acquaintances through social media before they move to Yuma to select a school and register as soon as possible (Participants D and E). However, the private preschools that have reputations for having the highest quality are difficult to get into: "You just keep your child on the waitlist and keep calling. It's kind of like a game actually. It can be difficult" (Participant D, interview, April 20, 2017). However, quality perceived by parents is not equivalent to quality based on early childhood education standards. Participant E noted that the quality of early childhood programs was tough to gauge in Arizona compared to a previous duty station in North Carolina,

where the state's quality rating system for early childhood education programs was more widespread (interview, April 21, 2017). Another stated, "I had to do a lot of work to find a good preschool. The quality varies widely here" (Participant D, interview, April 20, 2017).

For military families struggling to afford private school readiness programs, some states provide tuition-free public preschool programs or scholarships to private preschools for those who qualify. However, Participant G explains, "since the income of military members has gone up, military families do not typically qualify for Head Start or other public programs" (interview, February 14, 2017). Regardless of income, all military and civilian children with individual education plans qualify and receive special education services. However, for general education preschool, access is extremely limited. For the 2016–2017 school year, the Yuma District One public preschool program had a capacity of 243 students but admitted only eight military children (Participant H, interview, April 21, 2017). The number of other military families who also met income qualifications but were wait-listed was not calculated. This narrative provides additional context for early childhood education in Yuma County:

> Even with all the options for attending preschool, there are 5,000 in our area not attending preschool. Huge number. They are coming into our education system with no preschool. Maybe some are at home by choice with resources to homeschool, but the majority are living near the border or born to teen parents. There are many demographics that are at risk. We have a huge need in Yuma for early childhood education. (Participant H, interview, April 21, 2017)

This passage indicates that military children are not at the highest risk for poor school readiness in the Yuma community, particularly since every military family has at least one reliable source of income, health insurance, housing, and support from the command (Participant A, interview, April 20, 2017; Participant H, interview, April 21, 2017). It also suggests that resources are insufficient: Funding is not available to provide public preschool for all children who need it. Nevertheless, the community is proactively working to improving school readiness opportunities in Yuma County. For instance, enrollment in the Child Development Associate credentialing

program at Arizona Western Community College in Yuma is high, and the Yuma County Early Childhood Collaborative and First Things First are dedicated to improving early childhood outcomes (Participant G, interview, February 14, 2017; Participant H, interview, April 21, 2017). However, there is little participation from MCAS Yuma in these local organizations. For instance, no designated representatives from MCAS Yuma are required to attend these early childhood community meetings or serve on their boards of directors (Participant H, interview, April 21, 2017). Meanwhile, base leadership has advocated for collaboration with the local community in support of military children in kindergarten through 12th grade. For example, the annual Military Parent Support Group hosted by the MCAS Yuma commanding officer brings stakeholders from across the civilian and military communities together to discuss concerns about military children, educate one another, and network (Participant J, interview, February 1, 2017).

Military children also have the opportunity to enroll in the CDC located on MCAS Yuma. Subsidized by the government, service members pay on a sliding scale according to their rank and family income. Both military parents and professionals interviewed agreed that the quality of the center is outstanding: "I have got to hand it to the CDC here. It's one of the best in the country that I've seen. Their program is second to none" (Participant C, interview, April 6, 2017). Participant D, a kindergarten teacher, said, "kids from the CDC are well prepared" for her class (interview, April 20, 2017). A drawback of the CDC is the waiting list, which varies in length by age group. "CDC waiting lists are a huge issue," noted Participant B, who added that the larger branches of service, including the Army and Navy, have more capacity issues than the Marine Corps (interview, April 7, 2017). Despite the subsidized cost, the CDC is expensive, especially for a one-income family. Participant F added, "To go to the CDC, you have to have two working parents. It is pricey" (interview, April 19, 2017). For families who do not need or cannot afford full-time care at the CDC, a popular part-day program is available. Participant G

observed significant differences in the parenting practices and interactions with staff between the families who enroll at the CDC full-time and those who attend the part-day program (interview, February 14, 2017). Children attending full-time participate out of the necessity for their parents to meet employment obligations, while children are enrolled in the part-day program voluntarily to provide an "enriched environment with social skills" (Participant G, interview, February 14, 2017). Unlike many full-time families, part-day parents interact with the staff and exhibit healthier parenting practices and routines.

Additional military family support programming has expanded significantly since the wars in Iraq and Afghanistan began. Yet, the services and events these programs offer frequently overlap, inefficiently duplicating services (Participant J, interview, February 1, 2017). Furthermore, families do not always take advantage of these programs (Participants J and K). Participant G noted, "Military support programs might be successful if first, people were aware of them; second, if they were willing to get help; and third if they were to follow through with program recommendations. This is very difficult to achieve" (interview, February 14, 2017). Additionally, there are a growing number of single active-duty fathers, but most resources are designed for mothers, which may alienate fathers from utilizing programs (Participant G, interview).

The stigma against seeking help and lack of command support may also contribute to the low utilization of some military programs. Despite efforts to change this perception, the military culture includes a stigma against getting assistance, especially for mental health issues (Participant G, interview, February 14, 2017). Participant C describes the problem:

> I got to admit there are probably quite a few that have problems and don't seek out help because they're not informed or they're embarrassed or because of the stigma. Two out of 10 seek services; eight that need them do not. (interview, April 6, 2017)

Some unit commanders advocate for their marines to seek services, while others are less supportive because they doubt the effectiveness of programs, because programs take marines away from work, or for other reasons.

Military Life

Service members stationed at MCAS Yuma work long hours, usually 10–12 hr per day (Participants D and G). Even though they are residing with their families, "marine moral is very low . . . they are overworked, and they are stressed. . . . The stress from work impacts the marriage, kids, and the family" (Participant D, interview, April 20, 2017). The purpose of this demanding training schedule is to prepare for frequent deployments: Service members are deployed 6 out of every 18 months (Participant G, interview, February 14, 2017). Many participants observed that deployments presented a challenge for both the child and the primary caregiving parent (Participants C, D, F, I, J, and L). This narrative describes how deployments impact military children through the family system, which aligns with the family systems perspective and literature review findings:

> When a service member leaves, you can see anxiety in kids because of mom and what she is going through . . . if a mother is having trouble it manifests in a child's behavior. Sometimes kids are fine at the beginning and then a month goes by, and we see a lot of issues. Maybe it is because the child is missing the parent, but it might be because the spouse is stressed out due to increased responsibilities. (Participant F, interview, April 19, 2017)

A parent observed that deployments had negatively affected her children more at age 5 years than at age 2–3 years (Participant I, interview, April 21, 2017). Also, children were observed to struggle both during a deployment and after the service member returned home (Participant C, interview, April 6, 2017). Behaviors seen in children included anger, impulsivity, inattention, prosocial issues, and defiance (Participants C and F). Additionally, primary caregiving parents of children under the age of 5 years frequently chose to leave Yuma and return home during a deployment (which parents of school-aged children did not do), causing detrimental disruptions in their children's education (Participant I, interview, April 21, 2017).

Frequent relocation, inherent to military life, also interrupts a child's preparation for kindergarten. Adjustment to a new routine, home, school, and community presents challenges for many children and their parents (Participants C and E). While the military acknowledges the

hardships and educational disruptions relocation causes for children, they see the improvement of local schools as easier than restructuring the entire military (Participant A, interview, April 20, 2017). As a result, military families must seek new educational opportunities for their children with each move. However, variations in state laws and regulations between duty stations can be confusing for parents. For example, in one military family the parents failed to register their child for kindergarten in Yuma, as they were unaware it was mandatory, since it was voluntary in their home state (Participant F, interview, April 19, 2017). Also, when military children enroll in kindergarten, little is typically known about them. If a child has any learning issues, they are not usually recognized until later in the school year (Participant F, interview, April 19, 2017). However, the predictability and routine of school, social skill development, establishing a social network, counseling, and the utilization of military support programs embedded in schools helps many children adjust to new communities (Participants C, F, G, and L).

To learn of early childhood education programs, many families moving to Yuma contact the school liaison for help. While the liaison only supports children in kindergarten through 12th grade, a list of preschools is provided upon request, as a courtesy (Participant J, interview, February 1, 2017). Otherwise, parents rely on social media, school websites, and personal recommendations to find school readiness programs. However, military families sometimes have "hesitation of putting kids in new situations. . . . There is the fear of the unknown and a lack of trust since they are always new" (Participant E, interview, April 21, 2017). While some military parents are hesitant to enroll their children in school readiness programs, Participant C aptly summarizes the importance of school readiness for military children:

> There are significant challenges . . . because of the circumstances, it is difficult to get them prepared. The sooner you build their resilience and coping skills to be able to succeed the better they will be when it comes to moving, making new friends, and going to a new school. (interview, April 6, 2017)

Military Families

"The typical military family? There is no such thing," observed Participant C (interview, April 6, 2017). Despite differences among military families, they share their experience of

military service (Participants D and G). Like the findings of the literature review, Participant L found that the "key to a child's well-being is the primary caregiving parents' well-being and ability to cope" (interview, February 16, 2017). Also, the primary caregiving parent, who was described by all but one participant as the mother, was observed to be the parent who most often interacted with schools and other community resources (Participants B and K). Social support and engagement with the community, spearheaded by this parent, were seen to reduce stress for families. For example, a participant observed, "The more isolated a family is, the more issues they will have" (Participant J, interview, February 1, 2017). Another shared that "social support increases resilience: Families must engage and connect to have less problems" (Participant G, interview, February 14, 2017). While prevalent in the literature review, participants did not overtly mention the jeopardized psychological health of primary caregiving parents as influencing a child's school readiness. Perhaps the stigma of mental health problems results in primary caregiving parents concealing their mental health issues, and, as a result, the impact of their health and well-being on their children's development is not captured in the needs assessment data.

However, many military families, of both enlisted marines and officers, were found to be thriving and proactive in their children's education. A kindergarten teacher commented:

> I find military families are easy to work with, they are used to change, are outgoing, and they reach out to find what they need. These families have done their research; they are more educated, they have thought this through. Our school fills up, so people have to think ahead to get in. They are resourceful parents who will make the decision of where to live based on their child's education. (Participant D, interview, April 20, 2017)

Another added, "There are fewer [educational] options here in Yuma, but we don't have too many challenges. We are proactive at home so we don't have problems" (Participant I, interview, April 21, 2017). Generally, resourceful, proactive, involved, disciplined, and consistent parents—from families associated with any rank—were found to be better able to circumvent the challenges of military life and leverage opportunities for their children. However, some military

families were observed to lack the necessary knowledge and parenting skills, such as providing high expectations, consistency, routines, and modeling of coping skills, to optimize their children's development and advocate on their behalf. Parental age, or lack of maturity, was frequently used to characterize families who did not seek or utilize services available to them and their children (Participants A, C, F, G, J, K, and L). Age is also correlated to a marine's rank: Enlisted marines are likely to be younger than officers (Participants C, J, K, and L). A participant observed, "Sometimes parents are very young, and it is a struggle to get them to seek services when there is a need, or to follow through with recommendations or suggestions to do at home. It happens a lot" (Participant F, interview, April 19, 2017). Young parents were also seen to be unfamiliar with many parenting skills. A participant commented, "When parents are between the ages of 17 and 25 there's a huge amount of inexperience . . . it affects the child, and it literally does affect the entire family system" (Participant C, interview, April 6, 2017).

A lack of role models earlier in life who valued school, provided high expectations, and established consistent routines was also observed to be responsible for underdeveloped parenting skills in some military families (Participant G, interview, February 14, 2017). A participant described, "Many military members joined the military because they felt like there were no other options. It was a way out of a poor environment. They do not have great coping skills and young children add even more stress" (Participant G, interview, February 14, 2017). Another participant explained that these young parents lacked "a positive role model. . . . They are literally moving from the school of hard knocks opposed to having an A-plus example" (Participant C, interview, April 6, 2017). Participants found children in military families with low income, low educational attainment, and marital discord were at higher risk for difficulties (Participants G, J, and K). Drug abuse, domestic violence, and suicide, serious issues prevalent in the military community, were also mentioned as harming the development of young military children (Participants G and J).

Conclusion

Needs assessment data frequently aligned with literature review findings and the relationships between factors proposed in the conceptual framework. Below, a summary of the findings for each research question is presented.

Research Question 1

RQ1 asked how stakeholders perceive the importance of preparing young children for kindergarten. Most military leaders perceive education of military children to be important, in part, due to its impact on the readiness and retention of service members. However, beyond the generous funding of CDCs, education in kindergarten through 12th grade is prioritized over school readiness opportunities for military children aged under 5 years. For example, unlike military children in kindergarten through 12th grade, who have the assistance of the school liaison officer to address educational issues, families of children under 5 years of age have no support in identifying high-quality school readiness programs beyond those on the base. This emphasis on kindergarten through 12th grade may stem from the perception that school readiness programs are optional for kindergarten preparation rather than being a requirement. Finally, military families were found to value their children's early education.

Research Question 2

RQ2 asked what high-quality public, private, and military-sponsored school readiness resources are accessible for military children. Yuma community school readiness opportunities vary widely in accessibility, cost, and quality. Frequently, military families do not meet income requirements for public preschool programs. While the local CDC has a reputation for excellence, there are enrollment waiting lists, and families consider it expensive, especially for one-income households. Private school readiness programs in the community are of unknown quality, which worries parents. Without a comprehensive mechanism to evaluate the quality of each program, military families make educational decisions based on word of mouth and social media. No participants mentioned Quality First, Arizona's quality rating system, as a resource

for identifying school readiness programs. Also, while the number of military resources for families has grown, programs are underutilized due to stigma in military culture about seeking help or because families are unaware of services or doubt their value. All participants located in Yuma who work directly with military families stated that the families that need the most assistance often do not utilize support programs or fail to follow recommendations.

Research Question 3

RQ3 asked how the military lifestyle, especially deployments and relocation, impacts school readiness for military children. Needs assessment data affirmed that the military lifestyle creates challenges for families educating their young children. These difficulties are mediated through the family, and 3–5-year-olds are more affected than infants and toddlers by the disruptions caused by deployments or long work hours. Relocation is especially disruptive for a young child's education. With a lack of reliable information on local school readiness program quality, military parents rely on social media and word of mouth to select programs when moving to Yuma. Military parents also struggle to trust unfamiliar programs at new duty stations; therefore, they may opt to keep their children at home. Furthermore, relocation detrimentally affects employment of military spouses. A military family in which the spouse cannot find work in Yuma may not be able to afford school readiness programs.

Research Question 4

RQ4 asked in what ways military families impact the school readiness of their children.

As was found in the literature review, the well-being of the primary caregiving parent was emphasized as being key to the health and development of a young military child. However, their risk of poor psychological health was not as readily mentioned by participants as it was in the literature review. As in the Chapter 1 findings, young families of enlisted marines with low educational attainment, low income, or poor parenting skills were found by participants to be most at risk of experiencing parenting challenges but least likely to take advantage of available resources. To protect against the adverse effects of military life, participants noted the

importance of establishing a social network to reduce isolation upon arrival in Yuma: They found that engaged, connected families have improved resilience. Participants also noted that many military families were proactive in seeking educational opportunities for their children and that many military students were prepared for kindergarten. However, measuring military children's school readiness by comparing them with local civilian children is problematic. Cognizant of the significant challenges that Yuma families face when preparing their children for kindergarten, and with military children certain to attend school in many states, a national comparison would be more relevant and appropriate for military children.

Given these findings, Chapter 3 considers interventions that may mitigate challenges military families face when preparing their children for kindergarten. In particular, due to the overwhelming influence of the family and the primary caretaking parent on a military child's school readiness, Chapter 3's literature review focuses on school readiness interventions that target parents.

Chapter 3: Intervention Literature Review

To prepare a child for kindergarten, adequate development in multiple domains should be achieved by school entry (McWayne et al., 2012). When young children have responsive and sensitive caregivers within a safe, healthy, and nurturing environment, the development of social-emotional skills, executive functions, and mental and physical health is optimized, making school readiness likely (Center on the Developing Child at Harvard University, 2016). For military children, these early relationships, experiences, and environments vital for development were found, by both the literature review and the needs assessment, to be jeopardized by military affiliation (Green et al., 2013; Harmeyer et al., 2016; Schmitt et al., 2015). For instance, relocation and deployment, experiences inherent to military life, heighten the likelihood of a family system experiencing stress, depression, anxiety, financial strain, low social support, or marital discord (Anderson et al., 2014; Kelley et al., 2003; Lleras & McKillip, 2016; Schmitt et al., 2015). When families struggle, the health, well-being, and education of military children are negatively impacted. Furthermore, limited accessibility and availability of affordable, high-quality community and military school readiness resources is a challenge for military families. Together, these obstacles to school readiness, which according to the needs assessment data are present in this study's context, present a problematic scenario for military families with young children.

Of the six factors influencing a military child's school readiness identified in this study (relocation, deployment, health and well-being of the primary caregiving parent and family, military support programs, and local school readiness resources), families are the most consequential (Lester et al., 2016). The family systems framework and the ecological systems theory, the two theoretical frameworks supporting this study, buttress this conclusion: Child-level factors and external systems influence development, but family is central in the life of a young child (Bronfenbrenner & Morris, 2006; Cox & Paley, 1997). Furthermore, the primary caregiving parent in a military family, who is most commonly the mother, has a disproportionate

impact on the family system. This parent shoulders much of the household and parenting responsibilities due to the service member's long work hours and lengthy separations. Multiple studies have demonstrated the vulnerability of primary caregiving parents in military families to depression, anxiety, and sleep disorders, which can diminish their ability to provide physical and emotional care necessary for children's health, development, and school readiness (Eaton et al. 2008; Green et al., 2013; Harmeyer et al., 2016; Hur et al., 2015; Kelley et al., 2003; Lester et al. 2010; Mansfield et al., 2010; Okado et al., 2014; Waliski et al., 2012).

Given the influence of the family and the primary caretaking parent on a military child's school readiness, this literature review focused on school readiness interventions that target parents. Before exploring this research, the theoretical frameworks and needs assessment findings of this study are reviewed. Next, the conceptual framework is reexamined, adding parental preferences—elucidated by the accommodation model of child care decisions—as a factor in military child school readiness (Chaudry et al., 2010). A synthesis follows of civilian and military parent interventions that seek to improve school readiness through changes in parenting knowledge, skills, and preferences. Finally, a rationale for this study's intervention is presented.

Theoretical Frameworks

Together, the family systems perspective and the ecological systems theory support this inquiry on the school readiness of military children. First, the family systems framework describes the interdependent and reciprocal nature of a family (Cox & Paley, 1997). The interconnectedness of the family illuminates how the health and well-being of the service member, the primary caregiving parent, and their marriage are consequential for young children and how the consequences of military life for children are primarily mediated through the family system (Kelley et al., 2003; Lester et al., 2016).

Next, the ecological systems theory describes the bidirectional interactions that occur between systems that affect a child's development and school readiness (Bronfenbrenner &

Morris, 2006). According to this model, proximal processes—reciprocal and progressively complex interactions over time that occur between the child and persons, objects, or symbols in the child's immediate environment—drive and sustain human development (Bronfenbrenner & Morris, 2006; Paley et al., 2013). Many systems influence proximal processes and, as a result, also impact a military child's school readiness.

Needs Assessment Findings

The purpose of the needs assessment was to investigate the experience of military families stationed aboard MCAS Yuma, Arizona, with children aged 5 years and under as they prepare them for kindergarten. Through semistructured stakeholder interviews ($N = 12$), the influence of the military family, local and military school readiness resources, military life, and stakeholder perceptions of military child school readiness were investigated. Interviews revealed that many military families value their children's early education. However, the affordability of enrolling children in a school readiness program is a concern for military families and is exacerbated by high underemployment and unemployment rates among military spouses. Furthermore, unfamiliarity with local resources, due to their transient lifestyle, coupled with a limited school readiness quality rating system in Arizona, means that military families have difficulty identifying school readiness opportunities. With word-of-mouth recommendations as their primary source of information, families have only unreliable data with which to make decisions. However, the accredited, high-quality CDC, which is in high demand for full-time and part-time care, has lengthy waiting lists and is considered pricey by some families. Resourceful military parents from families associated with all ranks were able to circumvent many of the challenges of military life and leverage educational opportunities of varying quality for their children. Yet some military families, especially young families of enlisted marines, were observed by needs assessment participants to lack the necessary parenting knowledge and skills to provide adequate educational opportunities. Also, participants noted that those families who

were better adjusted and whose children were more likely to be thriving had established a social network locally, which reduced isolation and increased perceived support.

Factors that lead to the school readiness challenges military families face in the context of this dissertation are multifaceted and originate in all systems. Those residing in the macrosystem (e.g., Arizona early childhood policies, military program funding) and exosystem (e.g., military deployments and relocations) were beyond the scope of this study (Bronfenbrenner & Morris, 2006). Those factors that could plausibly be addressed by this dissertation resided in the microsystem (e.g., primary caregiving parent) and mesosystem (e.g., local and military school readiness resources). The alignment of the theoretical frameworks, the literature review, and needs assessment findings justified narrowing the focus of this intervention literature review to school readiness interventions that target parents.

Modified Conceptual Framework

The needs assessment findings revealed an additional factor to be considered in the conceptual framework described in Chapter 1. Missing from the initial analysis was the consideration of factors that drive school readiness decisions. The accommodation model of child care decisions —drawing from rational consumer choice (economics), heuristics and biases (psychology), and social network (sociology) models—provides a framework for understanding how parents select school readiness opportunities (Chaudry et al., 2010). It describes how parental preferences, family, and community factors create the context within which parents then evaluate their opportunities, constraints, and barriers to school readiness choices. This framework posits that families make decisions despite "imperfect information, subjective interpretations of objective stimuli, and the multiple, sometimes competing preferences of parents and their social networks regarding work, family, and care for children" (Chaudry et al., 2010, p. 27).

The accommodation model of child care decisions also states that parent preferences for school readiness programs are amenable to change through social interactions and social norms

communicated through their social networks and community organizations (Chaudry et al., 2010; R. Weber, 2011). Therefore, interventions situated within the community that aim to change parent preferences appear to have the potential to alter how parents evaluate and select school readiness programs and could help address this problem of practice. A mixed methods study by Oregon State University and University of Oregon professors used an exploratory sequential design to test this conceptual model's ability to explain the dynamic and complex child care decision-making process (R. Weber, Grobe, & Scott, 2018). The randomly selected sample included 41,402 low-income parents who participated in the Oregon child care subsidy program between 2005 and 2009. Stratified random samples were selected for interviews ($n = 44$) and telephone surveys ($n = 580$). The study found that multiple factors influence decision-making, including preferences (health and safety, location, shared values, educational focus), employment and transportation constraints, and affordability. Furthermore, family characteristics (education and income) and community characteristics (rural versus urban and employment rate) influenced whether parents chose center care, family child care (home based), or informal care by relatives, friends, or neighbors. For example, the study found that parents with higher levels of education select center care more frequently, and families in rural areas use more informal care. Provider trustworthiness was also a primary factor in decision making: "I don't like other people watching my kids that's not family, that I can't really trust . . . these are my kids and you can't trust them with strangers" (R. Weber et al., 2018, p. 535; see also Forry, Isner, Daneri, & Tout, 2014). The needs assessment similarly found trust to be a significant issue among military parents, in part due to frequent relocation to new, unfamiliar communities where they lack trusting relationships. A limitation of this study is its generalizability to other populations and contexts.

This study's literature review revealed high-quality school readiness programs are essential to improving child outcomes, especially for vulnerable populations (Grogan, 2012; R. Weber et al., 2018). Yet, family preferences, community factors, and logistical constraints, such as affordability, frequently influence family decision-making at the expense of program quality (Bassok et al., 2018; Dechausay & Anzelone, 2016; Forry et al., 2014; Grogan, 2012;

R. Weber et al., 2018). Furthermore, younger and less educated parents (the demographics of enlisted service members and their spouses) often have fewer high-quality options available due to affordability concerns and therefore consider fewer options, make decisions quickly, and prioritize convenience, location, and price over quality (Dechausay & Anzelone, 2016; Forry et al., 2014). As access to high-quality school readiness resources is imperative to improving kindergarten preparedness, interventions that shift parental preferences to favor high-quality school readiness programs and help families address various constraints on their access to these programs are of particular interest in this literature review (Duncan & Magnuson, 2013).

Intervention Literature Review Outline

School readiness is dependent on a combination of child, family, community, and societal factors. However, families explain the most variance in child outcomes in both civilian and military families (Shonkoff & Fisher, 2013). Through positive interactions, sensitive relationships, and a healthy caregiving environment, parents can affect brain development, social-emotional skills, language, executive functions, and health (Sanders & Kirby, 2014). Due to the prominence of primary caregiving parents in military families, the intervention literature review focused on this population. Also, as many military programs lack empirical review, an exploration of analogous civilian studies was informative: Parent interventions successful in improving child outcomes in other populations provided insight for this study.

Parent Interventions

School readiness interventions typically combine multiple strategies, target varied stakeholders, and seek to change different variables to reach their desired outcomes (Karoly, Kilburn, & Cannon, 2005). For instance, while preschool and home visitation programs are common interventions, they target different stakeholders (children versus parents), use various strategies (type of curriculum versus number of monthly visits), and aim to impact different variables (literacy rate versus parent–child interactions; Karoly et al., 2005). Also, the age of targeted children, the location of services, program intensity, program duration, and whether a

program is delivered individually or in a group differ according to the purpose of the intervention (Karoly et al., 2005).

Parent Involvement

Since parents are the most influential force in a young child's life, a two-generation approach that addresses the needs of both parents and children is vital (Shonkoff & Fisher, 2013). Typically, when parents are targeted, delivery formats include home visitation, parenting classes, or parent participation embedded within a preschool program. Content focuses on child development, parenting techniques, problem-solving, or self-awareness (Ansari & Gershoff, 2016). Even early studies on school readiness programs acknowledged the importance of a two-generation approach (Shonkoff & Fisher, 2013). For example, the 1960s High Scope Perry Preschool for low-income families, the subject of a seminal early childhood study, mandated parent participation and weekly home visits. Even 40 years later, positive adult outcomes, such as higher educational attainment and lower arrest rates, were detected among those who participated in the program as children (Shonkoff & Fisher, 2013).

Head Start, initiated in 1964 as part of Lyndon B. Johnson's War on Poverty, has also employed a two-generation approach since its founding (Ansari & Gershoff, 2016). This federal program seeks to improve child outcomes in low-income families through a combination of preschool, social services, health and nutrition promotion, and mandatory parent involvement, including volunteering in the classroom, attending parenting education classes and workshops, and serving on governing councils. Head Start posits that parent involvement improves parenting skills, knowledge, attitudes, and behaviors (Ansari & Gershoff, 2016). To determine whether parent participation was predictive of improved parent and child outcomes in Head Start families, Ansari and Gershoff (2016) examined Family and Child Experiences Survey 2006 data for 1,020 3-year-olds and 1,295 4-year-olds from 125 Head Start centers. Families answered questions about obstacles to participation, cognitive stimulation at home, and parental behavior. Head Start centers were also surveyed on the level of training staff received on involving and

educating parents. Furthermore, children's approaches to learning were evaluated using the Preschool Learning Behaviors Scale, and literacy and math skills were measured using the Peabody Picture Vocabulary Test, the Applied Problems subscale of the Woodcock-Johnson III Tests of Achievement, and other measures. Using structural equation modeling with latent factors, parent participation in Head Start was found to lead to positive parenting practices, including increased cognitive stimulation at home, resulting in improvements in behavioral and academic outcomes for children (Ansari & Gershoff, 2016). A limitation of this study was its inability to determine which parent involvement activities, or combination of them, were responsible for the findings. While parent involvement in a preschool setting has advantages, this approach has limitations with military families. For instance, with frequent relocation, family involvement is easily disrupted.

Parent Education Embedded in Preschools

Grindal et al.'s (2016) meta-analysis of 46 early childhood education programs (excluding Head Start) with a parent education component found only some methods of parent education to be effective in improving child outcomes. Multilevel modeling procedures were used to detect whether parenting education embedded in early childhood education programs, with or without modeling and practice, predicted gains in children's cognitive and preacademic skills. While the analysis methods limited the study's ability to determine causality between parent education and child outcomes, Grindal et al. found that programs that employed frequent home visits (three per month) or social learning methods (modeling and practice) were effective in changing child behavior and academic achievement. The authors found periodic parenting education classes on topics of interest to parents and infrequent home visits, both common practices in early childhood education programs, were ineffective in improving child outcomes (Grindal et al., 2016). This research is instructive for military family interventions: Active development of parenting skills, rather than the passive transmission of parenting information, is more effective in improving child outcomes.

Sabol et al. (2013) found that parent interventions that focusing on parent–teacher communication rather than actively developing parenting skills also has limited success promoting school readiness competencies. Using the National Center for Early Development and Learning Statewide Early Education Programs data set, these researchers sought to understand how family partnership standards set by states and accrediting organizations, such as the National Association for the Education of Young Children, impact student learning (Sabol et al., 2013). According to data on 2,419 children from 673 public prekindergarten programs, high-quality teacher–student interactions followed by engaging learning environments were the top two predictors of student learning. Structural elements, such as staff qualifications, staff–child ratios, and family partnerships contributed less to student outcomes (Sabol et al., 2013). The exclusion of private early childhood programs is a limitation of this study. Findings highlight that access to high-quality preschools, more than improving parent–school communication, is vital for school readiness outcomes.

Like to Sabol et al. (2013) and Grindal et al. (2016), Webster-Stratton, Rinaldi, and Reid (2011) also found that parenting programs that use social learning strategies, such as coaching, modeling, and practice, improve child outcomes. The authors investigated the long-term effects for 66 low-income families of the Incredible Years, a 12-session group class for parents of 3–8-year-olds that uses social learning techniques to improve parenting interactions and address conduct problems (Webster-Stratton et al., 2011). Follow-up assessments were conducted once these children turned 8–12 years old. Parents were interviewed and completed questionnaires, including the Child Behavior Checklist. Children also completed the Elliott Delinquency Scale, Child Depression Inventory, and other measures to determine adolescent functioning. Results from regression and chi-square analysis indicate that the children whose families had participated in the Incredible Years program had fewer conduct problems later in childhood, in part due to decreased coercive parent–child interactions (Webster-Stratton et al., 2011). A limitation of this study is the lack of a control group.

Furthermore, a randomized control study of the Incredible Years Basic Program used analysis of covariance and found improved social skills and conduct in children after parents completed the 14-session intervention (McGilloway et al., 2012). The authors also concluded that even families facing adversity could benefit from parenting training. A limitation of this study is low attendance: Only 60% of families completed the program. Attrition was credited to common participation barriers faced by families with social and economic difficulties, such as transportation or child care (McGilloway et al., 2012). These studies suggest that parent interventions that employ social learning strategies improve parenting competencies. Enlisted service members and their spouses are younger than the civilian population, have less formal education than the civilian population, and frequently experience adversity due to relocation or deployments; coaching, modeling, and practice embedded within parenting interventions may be especially applicable for this group of learners (Lundquist & Xu, 2014; U.S. Census Bureau, 2015).

Home Visitation

The federal government has invested $1,500,000,000 in home visitation programs since 2012 due to their effectiveness in improving parenting practices that lead to improved social-emotional and cognitive development in children (Schindler, Fisher, & Shonkoff, 2017). For instance, a meta-analysis of home visitation studies for at-risk families by Nievar, Van Egeren, and Pollard (2010) found a positive correlation between home visitation and improved parent and child outcomes. Across 29 studies (6,453 families), the most commonly used measure to assess maternal behavior was the Home Observation for the Measurement of the Environment. The analysis identified a positive effect on home visitation program participants, but chi-square tests revealed that not all programs had the same effect size. Like Grindal et al. (2016), Nievar et al. found that programs that visited families three times a month or more were far more successful than those with lower visiting frequencies. A limitation of this study is the lack of understanding of how home visitation curricula should be customized according to a targeted

population to maximize impact. It is noteworthy that the New Parent Support Program, a military-sponsored home visitation program for military families explored later in this chapter, is engaged in a quality improvement project to address this challenge of customizing the program for its intended population (The Pennsylvania State University, 2017).

Informational Interventions

Interventions that provide families with information on the quality of early childhood education programs are another strategy for improving school readiness outcomes. Such interventions hypothesize that early childhood education options are confusing, parents fail at accurately evaluating program quality, and inadequate information on quality from expert sources results in parents selecting poor-quality programs (Grogan, 2012). Moreover, past studies have found that parents rate the quality of their children's programs higher than assessors using validated tools—likely due to their inclusion of functional program elements not accounted for by expert measures, such as cost and location (Bassok et al., 2018). By improving parents' ability to evaluate quality or providing quality data on more programs, informational interventions aim to shift parent preferences toward higher-quality programs, which will cause them to prioritize school readiness program quality in their decision-making (Bassok et al., 2018). A significant challenge these interventions face is parents who base decision-making solely on functionality (cost, location, and hours) rather than quality (Bassok et al., 2018). Moreover, a limitation of informational interventions is that if high-quality programs are in low supply or at full capacity in a community, the provision of quality data will do little to increase the number of children enrolling in high-quality programs.

To explore how parents and experts evaluate preschool quality, University of Virginia professors collected data from 906 low-income parents using child care subsidies or receiving free public prekindergarten in rural and urban Louisiana communities (Bassok et al., 2018). Parents evaluated their children's programs according to opportunities to learn social and academic skills, the convenience of hours and location, cleanliness and safety of the

environment, and other quality dimensions. Prekindergarten data were collected on teacher–child interactions (using the Classroom Assessment Scoring System), structural features (teacher education and parent involvement), practical features (hours and transportation), and classroom learning gains measured by assessments such as the Peabody Picture Vocabulary Test. A limitation is that the study relies on parental self-reporting and includes mostly families who receive early childhood programming free of cost. Utilizing linear probability models, parent and expert evaluations of program quality were not correlated, and no clear patterns emerged between particular program characteristics and parent satisfaction. The authors concluded that parental decision-making was complex and that parents have difficulty evaluating programs, often overrating them, suggesting that informational interventions could be advantageous for many families. For military families, frequent relocation further exacerbates their unfamiliarity with school readiness programs and the difficulties they face in evaluating school readiness program quality.

Research has also begun to explore how to nudge parents toward selecting higher-quality school readiness programs. Using a behavioral economics approach, researchers first identified bottlenecks, or barriers, to selecting high-quality programs, including parent awareness of quality-ratings, criteria for choosing child care (parents' reference point for evaluating care is often limited to their personal experience), and ability to find quality-rated providers (Dechausay & Anzelone, 2016). Children (N = 12,652) who were newly registering for Indiana's Child Care and Development Fund subsidy were randomly assigned into three groups: a control group, a group that received customized materials for their family in the mail, and a third group that also received customized materials plus a phone consult with staff who shared knowledge and answered questions. The revised informational packet used strategies of personalization, simplification, implementation prompts, and visual cues and included suggestions of highly rated programs (ratings ranged from Level 1 [lowest quality] to Level 4 [highest quality]) near families' homes. Intent to treat analysis that estimated differences between these randomized groups found neither intervention (packet alone or packet and phone call) changed the likelihood

that parents would choose a highly rated provider. However, those who selected quality-rated providers were more likely to want higher quality programs (Levels 3 or 4). The group that only received revised materials reduced their selection of Level 1 programs by 1.7%. Those participants also receiving a phone consult increased their selection of Level 3 and 4 programs by a statistically significant 2.1%. A limitation of the study is the lack of parent interviews that may have provided further insight into parents' change of preferences and their decision-making processes.

To assist parents in making school readiness decisions and systematically improve early childhood education quality, most states have implemented quality rating and improvement systems (QRISs; Bassok et al., 2018). Unlike licensure, which narrowly focuses on health and safety standards, a QRIS sets quality standards, holds early childhood education programs accountable by assessing and ranking them using multiple quality indicators, and provides technical assistance, professional development, and other incentives to improve program quality (Bassok et al., 2018; Cannon, Zellman, Karoly, & Schwartz, 2017; Sabol & Pianta, 2015). The QRIS logic model suggests that quality ratings will cause parents to select higher quality school readiness programs. Also, increased demand for high-quality programs will incentivize programs to bolster their quality, therefore improving school readiness for their students (Sabol & Pianta, 2015).

Policymakers have demonstrated their interest in these large-scale interventions: Race to the Top—Early Learning Challenge grants (2011–2013) required applicants to both establish and validate a QRIS, and the reauthorization of the Child Care and Development Block Grant in 2014 required all states to create searchable school readiness program databases (Bassok et al., 2018; Lahti, Elicker, Zellman, & Fiene, 2016). Parents also are supportive of QRISs, as they help compare school readiness program quality (Bassok et al., 2018). However, to date there is low awareness and use of QRISs, and parents still primarily rely on informal sources such as friends, family, and others in their social network to choose a school readiness program (Bassok et al., 2018; Dechausay & Anzelone, 2016; Forry et al., 2014).

There are many challenges that states have faced in developing QRISs. For instance, some rating rubrics intended to help parents, policymakers, and providers to evaluate programs have not been strongly predictive of child development and learning (Cannon et al., 2017). Many QRISs focus on structural attributes rather than processes, which have been found to have a greater impact on student outcomes (Sabol et al., 2013). Furthermore, rating systems do not include functional features (cost, hours, and location) that parents view as measures of quality and influence their school readiness decision-making. Bassok et al. (2018) recommend that these school readiness program features valued by parents should be included in rating systems. Finally, expanding participation by early childhood education programs and measuring quality at scale is also a struggle, especially for states with limited QRIS funding (Bassok et al., 2018). Lahti et al. (2016) suggested that future studies address other key issues: whether standards are good indicators of quality, whether measures are reliable and valid, whether the resulting ratings assess quality in intended ways, and whether these ratings are associated with child outcomes.

For most QRIS rating systems, empirical validation is at the preliminary stage (Lahti et al., 2016; Sabol & Pianta, 2015). Virginia's QRIS (Virginia Star Quality Initiative) has undergone preliminary validation by University of Virginia and Northwestern University professors, who used data of 2,448 children in 71 state-funded prekindergarten programs across 14 communities (Sabol & Pianta, 2015). The authors examined children's growth in preliteracy juxtaposed with the program's rating on a 4-tiered scale. QRIS ratings were based on a combination of the qualifications and training of staff, teacher–child interactions measured by the Classroom Assessment Scoring System, adult to child ratio, class size, and the learning environment and instruction measured by Early Childhood Environment Rating Scale—Revised. Using hierarchical linear modeling techniques, the study found that attending a higher quality prekindergarten (3 star or 4 star) was predictive of improved literacy skills. One limitation of this study is the unknown external factors that drove parents to enroll in higher rated programs.

In Arizona, approximately 1,000 school readiness programs voluntarily participate in Quality First, Arizona's QRIS. Programs are rated on a 1–5-star quality scale according to

teacher–child interactions, health and safety, and other quality indicators (First Things First, 2018). Quality First provides professional development, coaching, access to specialists, and materials for participating programs to improve their quality. Parents can search for Quality First providers online, and a limited number of scholarships are available for income-eligible families to enroll in these quality-rated programs. However, limited funding prohibits expansion of Quality First. As a result, half of Arizona parents feel they lack adequate information on school readiness program quality (First Things First, 2012). Quality First's limited scope is to the detriment of school readiness: It prohibits families from making fully informed decisions about their children's education. This is magnified for military families, who move frequently and would greatly benefit from reliable school readiness quality data in every duty station.

Military Interventions

The experience of military families during the era after the attacks of September 11, 2001, was unprecedented. Unlike most previous conflicts, multiple combat deployments were commonplace, and the proportion of service members with spouses and children was far greater (Floyd & Phillips, 2013). In 2010, President Obama recognized the readiness and resilience of military families as a significant national security issue. As a result, Joining Forces, an initiative that coordinated support of military families across all sectors of American society, was founded (Whitestone & Thompson, 2016).

Family support programming for Marine Corps families is standardized across all installations and is intended to address the rigorous demands of military life (Gewirtz & Youssef, 2016). Administered by Marine Corps Community Services, the programs are intended to improve quality of life, help address challenges associated with military service, and develop the resilience required to face future challenges (Bowles & Bates, 2010). The CDC, youth center, base library, SLP, exceptional family member program are examples of programs offered at every Marine Corps base. Other programs provide preventative education and nonclinical or medical counseling or treatment with varying levels of acuity for marines and their families.

Families can self-refer, but marines can also be mandated by their leadership to take classes or undergo treatment.

When military operations slowed in 2011, budget cuts that followed significantly reduced funding for military family programs (Whitestone & Thompson, 2016). In the face of fiscal constraints, evaluating family programs for effectiveness and cost efficiency was prioritized, as were efforts to identify redundancies between programs (Whitestone & Thompson, 2016). To assist with program evaluation and improvement, the Department of Defense funded the creation of the Clearinghouse for Military Family Readiness, an applied research center, at The Pennsylvania State University (The Pennsylvania State University, 2017). Efforts include a quality improvement pilot project for the New Parent Support Program, which is a preventative home visitation program introduced in the 1990s by all four service branches that focuses on the transition to parenthood, positive parenting, and the prevention of maltreatment (DeVoe, Paris, & Acker, 2016). The clearinghouse is testing a new universal family evaluation plan to improve the assessment of family needs and implementation fidelity by home visitors (The Pennsylvania State University, 2017).

Furthermore, in 2012, the Department of Defense reenvisioned the system of military family readiness programming. Diverse and flexible delivery formats, increased use of technology, and provision of quick access to information and resources necessary for today's military family were desired changes (Department of Defense, 2015; Whitestone & Thompson, 2016). Also, with three fourths of active-duty families living off base in the civilian community, the Department of Defense recognized that collaboration with community resources were increasingly necessary to meet the needs of military families (Whitestone & Thompson, 2016). In partnership with the University of Minnesota, the Department of Defense founded an applied research and evaluation center called Military Center for Research and Outreach (REACH) to strengthen the family readiness system. Military REACH provides research, training, and resources to community programs to raise their awareness of military family issues (University of Minnesota, 2017).

Appreciating the community's vital role in supporting military families is exceptionally relevant for military child school readiness in the context of this problem of practice. While many military children attend an on-base CDC, even more children participate in local school readiness programs. However, unlike families of military children in kindergarten through 12th grade, who have the school liaison as an educational advocate, families with children under 5 years of age have little support when searching for high-quality school readiness opportunities in the local community (Aronson et al., 2011). Also, the current lack of collaboration and communication between the military, local school readiness programs, and early childhood advocacy organizations is a disservice to military families who rely significantly on the Yuma community for school readiness opportunities.

Barriers to Participation

Despite the positive impacts of parent interventions on child school readiness outcomes, families that would benefit most from services frequently do not access them (Heath et al., 2017; Sanders, 2012). For military families, lack of awareness, stigma attached to attending programs, logistical difficulties, and varied support from leadership all impact participation (Bowles & Bates, 2010; DiNallo et al., 2016). In the civilian population, obstacles to participation include a complex, decentralized source of information on school readiness opportunities, cumbersome enrollment processes, ineligibility, lack of transportation, and inconvenient scheduling of programs (Greenberg, Adams, & Michie, 2016). Also, cultural norms or community context, including poor perceptions of intervention quality, negatively impact participation (Crosnoe, Purtell, Davis-Kean, Ansari, & Benner, 2016). These barriers may also exist for many military families; therefore, understanding all factors preventing military parents from accessing resources is essential to improving military child school readiness (Walsh, 2012).

To explore parent participation, Heath et al. (2017) collected data from 136 families registered to attend early childhood parenting interventions. Parents completed measures on parenting self-efficacy, the Strengths and Difficulties Questionnaire about their children, and a

questionnaire about their participation in the program. About one third of parents failed to attend, and through chi-square and Mann-Whitney U analyses the authors found that higher socioeconomic status, higher parent education, and younger age of children were predictive of better attendance. The parent's perceived needs of the child and parental self-efficacy did not significantly influence attendance rates. Parents cited logistical and family factors, such as unpredictable work schedules, limited transportation, and the need for child care, as reasons for nonattendance. Furthermore, the authors found that nonparticipating parents were most likely to struggle with organization, planning, the ability to follow through, and other executive function skills. In fact, poor executive function may account for low participation rates even when programs try to make attendance easier by scheduling classes according to parent availability and providing make-up sessions, transportation, or child care. Therefore, parental executive function skills, necessary for employment, financial stability, and parenting, for instance, must be considered as a potential barrier to parent participation (Shonkoff & Fisher, 2013).

In another study on parent participation, authors conducted open-ended interviews with 27 parents who either never attended a parenting class they registered for or only participated once or twice (Duppong-Hurley et al., 2016). Parents cited scheduling difficulties most frequently as their reason for nonattendance. Over 80% of participants expressed interest in a web-based version of the parenting class, but parents indicated that their preferred delivery method would be a hybrid model that combined online and face-to-face sessions. Both formats would improve programmatic flexibility and the ability to meet the scheduling demands of families. This finding is highly applicable to military families, who have unique scheduling requirements due to their military service (Duppong-Hurley et al., 2016; Heath et al., 2017).

New Delivery Models

New delivery models may relieve the participation constraints faced by military families (Duppong-Hurley et al., 2016; Heath et al., 2017). Practical advantages of moving away from traditional face-to-face programming include reduced costs and increased programmatic

flexibility. Also, increased integration of technology may be attractive to digital-native military parents who are accustomed to using technology to learn (Blasko & Murphy, 2016; Duppong-Hurley et al., 2016; Hall & Bierman, 2016). Providing technology-based parenting resources may also help increase participation by reducing the stigma families feel when seeking in-person help (Blasko & Murphy, 2016; DiNallo et al., 2016). Moreover, many military families who fail to complete parenting training cite work schedules, deployments, and relocations as the reason (Doty et al., 2016). Therefore, alternative delivery methods may increase access for military service members and their families for many reasons.

Technological tools, including blogs, websites, apps, social media, and reality television, have been used to deliver early childhood parent interventions (Hall & Bierman, 2016; Heath et al., 2017; York & Loeb, 2014). For instance, Sesame Workshop's Talk, Listen, Connect videos and storybooks and Zero to Three's Babies on the Homefront app provide military families with parenting information outside of traditional in-person trainings (Blasko & Murphy, 2016; Zero to Three, 2017). While further research is needed on the effectiveness of these technology-infused interventions, some programs have preliminary empirical evidence for the efficacy of their delivery models (Crosnoe et al., 2016). For example, the FOCUS program experimented with a Veterans Affairs telehealth model for treating geographically dispersed service members. Initial results indicate that the six telehealth sessions with families allowed trainers to adhere to program requirements, including active coaching, and were accepted by families (Doty et al., 2016).

Text messaging interventions have also been used to promote parenting practices. For example, Ready4K! is a text messaging intervention that sends parents age-appropriate suggestions to bolster their children's literacy skills (York & Loeb, 2014). End-of-year surveys from parents and teachers and the Phonological Awareness Literacy Screening, an early literacy assessment, were collected from 440 families of 4-year-olds. After 1 year, the treatment group showed increased literacy activities at home and parent involvement at school that was linked to

literacy gains. A limitation of this study is the potential programmatic bias toward some subgroups resulting in the attrition of others.

Hybrid delivery models use technology to support in-person parent interventions. For example, the After Deployment Adaptive Parenting Tools program is based on the empirically supported Parent Management Training—Oregon Model but modified for military families. The program aims to improve parenting practices, emotional regulation, and mindfulness (University of Minnesota, 2017). The program included online modules aligned with 14 face-to-face sessions. The online content allowed families to access additional information, review learning, and make up missed sessions, but its use was voluntary. Doty et al. (2016) used descriptive analysis to consider the relationships between the use of online modules, face-to-face attendance, and family demographics for 207 families. Data suggested that only 52% of participants chose to use the online component of the program as a supplement to the face-to-face sessions. The authors concluded that the military population may benefit from a similar hybrid approach in which the online component provides flexibility and the face-to-face sessions ensure emotional support is available (Doty et al., 2016). A potential limitation of the study's applicability is that most parents who elected to engage with online modules had high educational attainment, which is unlike the demographics of primary caregiving parents in the families of enlisted service members.

The Triple P Online parenting intervention uses another type of hybrid model: Parents complete eight online modules but also receive practitioner support, through phone calls, for each module. In a study by Day and Sanders (2017), the authors sought to understand how the addition of 2 hr of individualized professional support and initial distress levels impacted parenting outcomes. Participants from 183 families with children aged 2–8 years were divided into three groups: self-directed, practitioner supported, and control. Data on negative parenting, self-efficacy, parental distress, intervention engagement, and attrition were collected using the Depression, Anxiety, and Stress Scale and other measures. Structural equation modeling found professional support improved parenting outcomes as measured by reduced negative parenting.

Also, practitioner support increased participation and parent satisfaction and produced stronger effects than the online program with no support. A limitation of this study is the small sample used. These findings suggest limited practitioner support produced significant positive impacts on parenting practices (Day & Sanders, 2017). For military families, over-the-phone practitioner support may meet both the scheduling and individualized support demands of this population.

Intervention Rationale

This intervention literature review reaffirmed that access to high-quality programs is paramount for a child's school readiness but that parents have difficulty identifying and enrolling in these excellent programs (Bassok et al., 2018; Sabol et al., 2013). The context of this problem of practice lacks a comprehensive mechanism to evaluate the quality of school readiness programs: No military resources exist for this purpose, and Arizona's Quality First rating system has a limited reach (First Things First, 2018). Therefore, military families rely on word of mouth and social media to judge school readiness program quality and frequently overrate programs (Bassok et al., 2018). However, even if perfect information existed, affordability and capacity concerns prevent children from attending high-quality school readiness programs. Along with community and family factors, parent preferences for school readiness programs also drive parent decision-making.

The literature review explored many intervention approaches that have the potential to improve school readiness. However, when considering the unique challenges faced by military families within the context of MCAS Yuma, an informational intervention was deemed most relevant, promising, and practical (Bassok et al., 2018; Dechausay & Anzelone, 2016). This study's informational intervention sought to shift parent preferences toward higher quality school readiness programs by improving school readiness knowledge and providing community support (Bassok et al., 2018). The intervention filled an urgent need: It empowered enlisted marines and their spouses to advocate for their children despite complex and changing school readiness contexts. As access to high-quality school readiness resources is imperative for improving

kindergarten preparedness, shifting parental preferences to favor high-quality school readiness programs was fundamental to this intervention (Duncan & Magnuson, 2013).

A mixed methods convergent parallel research design was selected. In this design, process and outcome evaluation data were collected primarily through participant surveys and interviews. An in-person group training and an individualized phone consult were the intervention's two main components (Day & Sanders, 2017; Doty et al., 2016). The in-person group training utilized social learning strategies and provided community support (Doty et al., 2016; Grindal et al., 2016; Sabol et al., 2013; Webster-Stratton et al., 2011). It provided participants opportunities to explore the concept of school readiness, current parental school readiness preferences, local and military school readiness resources, characteristics of high-quality school readiness programs, how to evaluate program quality, and problem-solving within the typical constraints of access and affordability (Augustine et al., 2009; Barnett et al., 2016; McWayne et al., 2012; Shonkoff & Fisher, 2013; Sabol et al., 2013). A phone consult with the researcher after the training focused on the intervention's content as it related to the participant context (e.g., opportunities, challenges, and constraints; Day & Sanders, 2017; Dechausay & Anzelone, 2016). A detailed description of the intervention's research questions, design, methods, and procedures are discussed next, in Chapter 4.

Chapter 4: Intervention Design

Of the factors influencing a military child's school readiness, families are the most consequential (Lester et al., 2016). The two theoretical frameworks supporting this study (the family systems framework and the ecological systems theory) buttress this conclusion: External systems influence school readiness, but family is central to the development of a young child (Bronfenbrenner & Morris, 2006; Cox & Paley, 1997). According to the literature review and needs assessment findings, the primary caregiving parent in a military family has a disproportionate responsibility for household and parenting duties. Furthermore, families of enlisted service members are at higher risk than families of officers of their children being unprepared for kindergarten. Therefore, this intervention targets the primary caregiving parents in families of enlisted service members. This study is consequential for military children, as families of enlisted service members encounter many barriers to preparing their young children for kindergarten in complex and changing contexts. By empowering parents with school readiness knowledge and community support, this intervention sought to prepare families to be champions of their children's early education (Dechausay & Anzelone, 2016; Flake et al., 2009; Forry et al., 2014; Green et al., 2013; Lester et al., 2016).

Purpose of Study

Research on early childhood education is clear: Quality matters (Duncan & Magnuson, 2013). High-quality early childhood education programs have been linked to improved school readiness, but low-quality programs have little to no effect (Barnett et al., 2016; Duncan & Magnuson, 2013; Heckman et al., 2010). Therefore, if military families could increase participation in high-quality programs, their children could be better prepared for kindergarten. However, there are significant constraints on increasing enrollment in excellent programs in the context of this problem of practice. Without a comprehensive quality rating system, military parents lack adequate quality data on school readiness programs (First Things First, 2012). Therefore, the availability of high-quality school readiness programs in Yuma, beyond those

accredited by the National Association for the Education of Young Children or rated by Arizona's Quality First, is unknown.

Even if perfect information existed, family preferences, community factors, logistics, and affordability can prevent children from attending high-quality school readiness programs (Bassok et al., 2018; Dechausay & Anzelone, 2016; Forry et al., 2014; Grogan, 2012; R. Weber et al., 2018). According to the accommodation model for child care decisions, these factors create the context within which parents evaluate their school readiness opportunities, constraints, and barriers to participation (Chaudry et al., 2010). However, this framework posits that parental preferences for school readiness programs are amenable to change through social interactions and social norms communicated through parents' social networks and community organizations (Chaudry et al., 2010; R. Weber, 2011). As a result, interventions situated within the community that aim to change parent preferences appear to have the potential to alter how parents evaluate and select school readiness programs and could help address this problem of practice (Chaudry et al., 2010).

This intervention sought to increase parent preferences for high-quality school readiness programs through improved school readiness knowledge and community support, thereby maximizing the selection of higher quality programs within families' contextual limitations (Chaudry et al., 2010). Intervention participation was hypothesized to improve parents' school readiness knowledge, resulting in a reexamination of personal and family preferences and opportunities and constraints within the local context and leading to greater participation in high-quality school readiness opportunities (Chaudry et al., 2010). While the measurement of midterm and distal outcomes was beyond the scope of this dissertation, changes in preferences were expected to alter parent behavior or decision-making: If parents understood the importance of school readiness program quality, they would make efforts to identify and participate in these opportunities, thereby improving military child school readiness.

As elucidated in the logic model (Appendix E), the intervention's proximal outcomes included increased parent preference for high-quality school readiness programming and

improved community support. Community support is prominently figured into this intervention as it has been found to help military families buffer themselves against the ill effects of military life and improve family adjustment and child outcomes (Barker & Berry, 2009; Doty et al., 2016; Flake et al., 2009; Green et al., 2013; Waliski et al., 2012). However, the theory of treatment (Appendix F) identified changes in parental school readiness knowledge as the primary mechanism responsible for the intervention's treatment effect (Chaudry et al., 2010; Leviton & Lipsey, 2007).

Six process and evaluation research questions guided this study.

Process Research Questions

RQ1: To what extent did participants complete intervention activities? Did the researcher deliver the program as intended?

RQ2: How did the research design alleviate or intensify contextual constraints that affect participation?

RQ3: What were participant perceptions of their intervention experience?

Outcome Research Questions

RQ4: To what degree did participants' perceived community support change from pre- to postintervention?

RQ5: To what extent did participants' school readiness knowledge change from pre- to postintervention?

RQ6: How did participants' school readiness preferences change from pre- to postintervention?

Research Design

A mixed methods approach was selected based on its pragmatic ability to address each research question, as qualitative or quantitative approaches alone were deemed insufficient or lacking in depth (Creswell & Clark, 2011). A mixed methods convergent parallel design allowed for complementarity, completeness, and triangulation (Creswell & Clark, 2011). For example,

triangulation, or the comparison of quantitative (e.g., survey) and qualitative (e.g., interview) data sets, increases confidence in a study's outcomes if both sets of data lead to the same conclusions (Onwuegbuzie & Leech, 2006). As is typical for convergent parallel research design, qualitative and quantitative data were collected concurrently, had equal priority, were initially analyzed separately, and were later compared side by side (Creswell & Clark, 2011). Furthermore, process and outcome evaluations were central to the design of this study (Creswell & Clark, 2011; Shadish, Cook, & Campbell, 2002).

Process Evaluation

Process evaluation provides an understanding of the extent to which an intervention was implemented with fidelity, or according to the research and intervention design, and why adjustments during implementation may have been required. For this study, the process evaluation components of reach, dose delivered, context, and participant perceptions were used to assess implementation.

Reach and dose delivered. Reach and dose delivered were utilized to assess implementation fidelity, or whether program implementation occurred according to the intervention's design as described in the logic model (Appendix E; Linnan & Steckler, 2002). Reach (i.e., who participated in each of the intervention's activities) and dose delivered (i.e., what information was shared with participants by the researcher) was addressed by the first process evaluation research question (Table 1). An attendance log captured quantitative data needed to analyze reach, and qualitative data, gathered using training debriefing notes, phone consult transcripts, and follow-up e-mails, were analyzed to determine dose delivered.

Context. The context—the social, political, economic, or other influencing features in the landscape that impact intervention implementation—was addressed by the second process evaluation research question (Table 1; Baranowski & Stables, 2000). According to the ecological systems theory, multiple systems impact a child's development, and thus both the logic model (Appendix E) and theory of treatment (Appendix F) recognized the influence of the local Yuma

community and military life on the study's population (Bronfenbrenner, 1994). While many contextual factors were out of this intervention's control, the varied delivery methods (e.g., in person and over the phone) were designed to optimize participation despite limiting contextual factors such as scheduling and child care issues. Pre- and postintervention interview data and phone consult transcripts provided information on the influence of context on the intervention's implementation and whether the hybrid delivery method was able to alleviate contextual constraints. For instance, the postintervention interview included questions such as, "How did the design of this program allow or discourage your full participation?" (Appendix O).

Participant perceptions. The third process evaluation research question sought to understand the participant's perceptions of his or her intervention experience (Table 1; Dusenbury, Brannigan, Falco, & Hansen, 2003). For instance, participants' perceptions of the group session and the phone consult, the intervention's two major components, were important. Interviews following the intervention provided an in-depth understanding of their experiences by asking questions such as, "How did you perceive the usefulness or relevance of the phone consult and group session?" (Appendix O).

Table 1

Process Evaluation Mixed Methods Research Design

Construct	Indicator	Instrument
Research Question 1: To what extent did participants complete intervention activities? Did the researcher deliver the program as intended?		
Attendance at group session and phone consult	Signature on attendance log (by participant or researcher)	Attendance log
Presentation of key learning objectives	Researcher-delivered planned curriculum including the provision of resources and materials	Researcher debriefing notes; phone consult transcripts; follow-up e-mails to participants
Research Question 2: How did the research design alleviate or intensify contextual constraints that affect participation?		

Construct	Indicator	Instrument
Contextual elements impacting participation	Transportation, employment, child care, time commitment, location, stigma	Pre- and postintervention interview transcripts; phone consult transcripts
Research Question 3: What were participant perceptions of their intervention experience?		
Participant perceptions	Relevance, usefulness, training logistics, instructional approaches	Phone consult transcripts; postintervention interview transcripts

Outcome Evaluation

The outcome evaluation (Table 2) isolated the intervention's impact on perceived community support, school readiness knowledge, and school readiness preferences (Bassok et al., 2018; Chaudry et al., 2010; Dechausay & Anzelone, 2016; Shadish et al., 2002; R. Weber, 2011). Perceived community support and school readiness knowledge were hypothesized to covary with parent preferences for high-quality school readiness programs (Shadish et al., 2002).

Table 2

Outcome Evaluation Mixed Methods Research Design

Construct	Indicators	Instruments
Research Question 4: To what degree did participants' perceived community support change from pre- to postintervention?		
Perception of community support	Connections with others, common purpose, feeling understood, feeling help is available and accessible	Pre- and postintervention interview transcripts; phone consult transcripts; Community Assessment of Military Perceived Support Survey (Conforte et al., 2017; Appendix G)
Research Question 5: To what extent did participants' school readiness knowledge change from pre- to postintervention?		
School readiness knowledge	Domains of early learning, early brain development, characteristics of high-quality school readiness programs, measures of quality	Pre- and postintervention interview transcripts; phone consult transcripts; School Readiness Knowledge Survey (Appendix H)

Research Question 6: How did participants' school readiness preferences change from pre- to postintervention?		
Parent preferences for school readiness programs	Trustworthiness; health, safety, and cleanliness; shared values (religion, teaching philosophy, etc.); convenient hours and location; support of learning	Pre- and postintervention interview transcripts; phone consult transcripts; Parent Perceptions of Child Care Choices and Quality Survey (Raikes et al., 2005; Appendix I)

Methods

This study's methods, including participants, measures, and data collection and analysis, are described in this section.

Participants

Intervention participants were primary caregiving parents (who performed more than 50% of child-rearing duties) of military children (who had at least one parent who was an active-duty enlisted marine) aged 0–5 years. To be eligible, the service member in the family must have been stationed at MCAS Yuma in Arizona. Prior research found that families of enlisted service members were at greater risk than families of officers of poor school readiness outcomes (Flake et al., 2009; Green et al., 2013; Lester et al., 2016). Therefore, this study limited its participants to primary caregiving parents from families of enlisted service members. Nonprobability sampling techniques were used to identify potential participants. Judgment sampling identified three eligible participants, and three spouses who held leadership positions in the community served as key informants and suggested three additional parents (Soriano, 2013). Snowball sampling among these eligible parents resulted in the recruitment of the final two participants. Ultimately, all participants were civilian wives of active-duty marines.

Once participants were identified, the researcher obtained from each participant, by personal communication, the rank of her spouse and verification that she was the primary caregiving parent of a 0–5-year-old military child. Participants were required to complete an informed consent form (Appendix J) before engaging in any intervention activities. They were not responsible for any costs associated with the study. However, they needed access to a phone

or computer to complete surveys and communicate with the researcher. Incentives for participation included free child care and refreshments during the group session.

Effect size estimates allow for calculation of the required sample size (Hill, Bloom, Black, & Lipsey, 2008; Lipsey et al., 2012). To determine sample size, empirical benchmarking of four analogous parenting intervention studies was used to approximate an effect size norm (Baker, Sanders, Turner, & Morawska, 2017; Gewirtz, DeGarmo, & Zamir, 2018; Lipsey, 1998; Lipsey et al., 2012; Sanders, Kirby, Tellegen, & Day, 2014; Zhang, Rudi, Zamir, & Gewirtz, 2017). However, the determined sample size of over 100, needed to detect similar effect sizes, was unrealistic due to the time and resource constraints of this dissertation. Consequently, this study's small sample limited qualitative and quantitative analysis.

Instrumentation

The instruments used during the process and outcome evaluations are described below. Also, a participant demographic survey was administered before the intervention, and data such as family income and number of relocations were considered in the analysis of all research questions (Appendix K).

Process evaluation instruments. Process evaluation instruments provided qualitative and quantitative data necessary to assess the intervention's implementation (Baranowski & Stables, 2000; Dusenbury et al., 2003; Linnan & Steckler, 2002). These instruments included an attendance log, researcher debriefing notes, phone consults, follow-up e-mails, and pre- and postintervention interview transcripts (Table 1).

Attendance log. To address reach in RQ1, the researcher collected attendance data for the group session and the individual consults using an attendance log (Table 1; Appendix L). According to the logic model (Appendix E) and theory of treatment (Appendix F), participant attendance at both activities was vital for the intervention: If a participant failed to complete either intervention component, that participant would miss a significant portion of intended learning, which may have distorted the study's findings (Linnan & Steckler, 2002).

Researcher debriefing notes. The researcher reviewed the presentation of core learning objectives following each group session. In the researcher debriefing notes, the delivery of planned content was assessed and documented (Linnan & Steckler, 2002). For instance, the researcher reflected on the presentation of core content, such as early brain development and school readiness domains. These notes provided data necessary to address the dose delivered in RQ1 (Linnan & Steckler, 2002; Table 1).

Phone consults. The phone consult facilitators' guide outlined the objectives for the conversation between the researcher and a participant following the in-person training (Appendix M). For instance, the researcher planned on asking, "Are you facing obstacles in finding, selecting, or enrolling in school readiness opportunities?" To determine whether the researcher delivered planned intervention content (dose delivered), conversations were recorded, transcribed, and coded (Linnan & Steckler, 2002).

Follow-up e-mails. Follow-up e-mails were sent to participants following phone consults to provide additional information or resources requested by the participant. The content of these e-mails produced data needed to evaluate the dose delivered in RQ1.

Pre- and postintervention interviews. Semistructured interviews were used to collect data for RQ2 and RQ3 (Appendix N and Appendix O). RQ2 addressed the ability of the intervention's delivery methods (in person and over the phone) to meet the logistical and social needs of military families and, therefore, increase the likelihood of participation (Day & Sanders, 2017; Doty et al., 2016). For instance, interview questions such as, "How did the design of this program allow or discourage your full participation?" addressed the ability of the research design to alleviate or intensify contextual constraints. Interviews also provided data on participants' perceptions of their intervention experience for RQ3. For example, how participants perceived the intervention's instructional design was important. A postintervention interview question on this topic asked, "How did you perceive the usefulness or relevance of the group session and the phone consult?"

Outcome evaluation instruments. Changes in perceived community support, school readiness knowledge, and school readiness preferences were measured using outcome evaluation instruments including pre- and postintervention interviews, phone consult transcripts, and three surveys: the Community Assessment of Military Perceived Support Survey (Conforte et al., 2017), a school readiness knowledge survey, and the Parent Perceptions of Child Care Choices and Quality Survey (Raikes et al., 2005; Table 2).

Pre- and postintervention interviews. Interviews were used to collect data for outcome evaluation questions RQ4, RQ5, and RQ6 (Appendices K and L; Table 2). To answer RQ4, participants were asked about their perceptions of community support before and after the intervention. Postintervention questions included, "How did this intervention impact the level of support you have felt while seeking school readiness opportunities for your young child?" Next, for RQ5, participants were asked about their knowledge of school readiness. Before the intervention, parents were asked, "What do you know about school readiness?" and afterward the question was posed, "How has the intervention changed what you know about school readiness?" Last, to further explore school readiness preferences for RQ6, participants were asked, "What kind of school readiness opportunities are you interested in for your child?" before the intervention. Following intervention participation, questions such as, "Have you learned any new information that has changed what you will look for in a school readiness program in the future?" were posed to parents.

Phone consults. To provide data for RQ4, RQ5, and RQ6, phone consults were recorded, transcribed, and coded. This intervention component was intended to provide individualized support while ensuring that the parent had received the intervention's essential content. For example, to support each participant's learning, the researcher asked during the phone consult, "Do you have questions about topics we covered in training?" (Appendix M).

Community Assessment of Military Perceived Support Survey. Participants completed this survey before and after the intervention to provide necessary data to address RQ4 (Table 2).

Military families experience unique stressors, including relocation, threats to service member safety, and deployments, but community support provides protective effects for the well-being of parent, child, and family, especially during times of stress or hardship (Conforte et al., 2017). Therefore, the Community Assessment of Military Perceived Support Survey was developed to measure the construct of community support in military families and its relationship to parent and child psychosocial functioning (Appendix G; Conforte et al., 2017). Study participants indicated whether they agreed or disagreed with 25 statements about military community support. For example, statements addressing raising children in the military included, "I am dissatisfied with the military community as an environment for raising children" (Conforte et al., 2017, p. 1876). Community resources were also assessed: "There are people within the military community that would give me valuable information about community agencies and resources if I needed it" (Conforte et al., 2017, p. 1876). According to extensive testing of the tool by Conforte et al. (2017), the survey produced valid and reliable results. Construct validity was established through a factor analysis comparison to a similar validated instrument measuring community support: The two were significantly associated (Herrero & Gracia, 2007). Also, Cronbach's alpha was used to determine internal consistency reliability, or whether items in the survey measure the same construct. Alpha was .94, indicating adequate internal consistency.

School readiness knowledge survey. This researcher-created survey provided the data necessary to address RQ5 (Appendix H; Table 2). The participants completed this survey before and after the intervention to measure parents' school readiness knowledge on topics including early childhood development, school readiness domains, and measures of school readiness program quality. For example, the survey asked, "Name three characteristics of a high-quality school readiness program."

Parent Perceptions of Child Care Choices and Quality Survey. The Parent Perceptions of Child Care Choices and Quality Survey was used to determine whether the intervention changed parent preferences for school readiness programs and answer RQ6 (Appendix I; Raikes

et al., 2005). The survey included 23 reasons why parents select early learning programs. Participants were asked to rate each statement according to its importance on a scale of 1 to 5, with 5 being the most important. Reasons for selecting a program included staff qualifications, logistics, aligned values, teaching approaches, and reputation. For instance, the participant was asked to rate the importance of "the provider offers stimulating activities and programs" (Raikes et al., 2005, p. 16), "the provider is accredited" (p. 16), and "the provider's discipline and guidance styles match yours" (p. 16). The participants completed this survey before and after the intervention.

The Parent Perceptions of Child Care Choices and Quality Survey was created by the Gallup Organization and University of Nebraska researchers and based on previously validated scales, including the Emlen Scales (Emlen, 2007; Raikes et al., 2005). The Emlen Scales established internal consistency, or reliability, using Cronbach's alpha, with values ranging from .72 to .93 for each aspect of child care quality (e.g., skilled caregiver, rich activities, and environment; Emlen, 2007). Furthermore, concurrent validity was established when the results of the two subsamples were found to be highly correlated.

Procedure

The intervention was conducted in May and June of 2019 and included two major activities: a group session and an individual phone consult (Table 3). Families typically make school readiness decisions very quickly and with limited information (Chaudry et al., 2010; Forry et al., 2014). Therefore, the duration of this intervention was brief and timed to occur before the start of a new school year. Furthermore, a hybrid delivery design was selected, with the flexibility and the social support needs of military families in mind (Duppong-Hurley et al., 2016; Heath et al., 2017). For instance, the group session offered social support and flexible scheduling and the over-the-phone consults provided individualized support at the convenience of the participant (Blasko & Murphy, 2016; Day & Sanders, 2017; DiNallo et al., 2016; Doty et al., 2016). This hybrid delivery model had several practical advantages over traditional face-to-

face programming, including reduced cost, fewer logistical obstacles preventing participation, and attractiveness to digital-native parents who are comfortable using various modalities to learn (Blasko & Murphy, 2016; Duppong-Hurley et al., 2016; Hall & Bierman, 2016). An in-depth description of each intervention component follows.

Table 3

Intervention Timeline

Activity	Timeline	Duration	Description
Recruitment of participants	April to May 2019	1 month	Recruit primary caregiving parents of military children (aged 0–5 years) stationed at MCAS Yuma, AZ from enlisted families.
Preintervention survey administered	May 15–30, 2019	15 days	Electronic link to the survey and completion reminders were texted and e-mailed to participants.
Preintervention interviews	May 15–30, 2019	15 days; interview length varied by participant	Semistructured interviews conducted over the phone.
Group session	May 23 and June 4, 2019	1 time, 1.5 hr. 2 sessions offered.	Explored early childhood development, school readiness domains, characteristics of high-quality school readiness programs, quality measures, and navigation of accessibility and affordability constraints.
Individual phone consult	June 1–15, 2019 (following group session)	1 session, length varied according to participant (approximately 30 min)	Discussed the intervention's content as it related to the participant; Problem-solved within constraints of access and affordability.

Postintervention survey administered	June 1–15, 2019	15 days	Electronic link to the survey and completion reminders were texted and e-mailed to participants.
Postintervention interviews	June 1–15, 2019	15 days	Semistructured interviews conducted over the phone.

The one-time 1.5-hr in-person group session was delivered on May 23 and June 4 at an on-base community center. Efforts were made to accommodate participant schedules: Several choices of dates and times were offered based on parent suggestions. E-mails and text messages were sent to remind participants of their session date, time, and location. Free food and child care were provided as an incentive to attend. The purpose of the group session was to strengthen parents' school readiness knowledge on topics including early brain development, school readiness domains, and characteristics of high-quality school readiness programs. Exploring their current school readiness preferences and learning how to problem-solve within constraints of access and affordability was also a goal of the training. All instruction was presented in simple, parent-friendly language, contextualized for the context, and personalized for each participant when possible. An overview of the group session content is provided in Appendix P.

Parent interventions that actively develop parenting skills, rather than passively transmit information, have produced desired participant outcomes (Sabol et al., 2013). Therefore, this intervention utilized social learning techniques, such as modeling and coaching (Ansari & Gershoff, 2016; Beardslee et al., 2011; Walsh, 2012). For example, early brain development was introduced through brief videos, reinforced through a researcher-designed game, and summarized by engaging participants in a highly participatory reflection and discussion. Furthermore, videos supported researcher explanations of school readiness domains. Then, after modeling by the researcher, each parent worked with a partner to sort the skills and competencies for a kindergarten-ready child according to each school readiness domain.

The purpose of the phone consult was to reinforce and personalize the in-person training objectives for each participant. The researcher's script was predetermined but responsive:

Participants were welcome to ask questions, share concerns, and problem-solve with the researcher (Dechausay & Anzelone, 2016). This conversation occurred after the group session, and scheduling of the consult was flexible according to participants' preferences. The call was planned to last 30 min, but length varied according to each parent's needs. Phone calls were recorded, transcribed, and coded. An e-mail with additional resources or information requested by the participant during the phone consult was sent to the participant following the call. The detailed phone consult facilitators guide is provided in Appendix M.

Data Collection

Qualitative and quantitative data were collected separately, but concurrently, and given equal importance in this study (Creswell & Clark, 2011). Before collection, each participant was assigned a number and a pseudonym that was stored separately from the data to ensure confidentiality. The many instruments used to collect data are described below (Table 4 and Table 5).

Attendance log. Group session and phone consult attendance were recorded by the researcher in a password-protected spreadsheet using the participants' confidential identifier (Appendix L).

Researcher debriefing notes. Following each group session, the researcher took debriefing notes to assess the degree to which planned content was delivered.

Phone consult transcripts. Each phone consult lasted approximately 30 min and was recorded using the Call Recorder App, uploaded to Google Drive, transcribed, and coded.

Follow-up e-mails. If requested by a participant, a follow-up e-mail with additional resources was sent after the phone consult.

Table 4

Process Evaluation Data Collection and Analysis

Timing of collection	Quantitative instrument	Qualitative instruments	Data analysis
Research Question 1: To what extent did participants complete intervention activities? Did the researcher deliver the program as intended?			
During and after group sessions and phone consults	Attendance log (Appendix L)	Researcher debriefing notes; phone consult transcripts; follow-up e-mails to participants	Descriptive statistics Descriptive coding/pattern coding
Research Question 2: How did the research design alleviate or intensify contextual constraints that affect participation?			
During phone consults; end of intervention		Pre- and postintervention interview transcripts; phone consult transcripts	Descriptive coding/pattern coding
Research Question 3: What were participant perceptions of their intervention experience?			
During phone consults; end of intervention		Phone consult transcripts; postintervention interview transcripts	Descriptive coding/pattern coding

Interviews. Semiformal interviews were conducted before and after the intervention over the phone, and each lasted approximately 30 min (Appendix N and Appendix O). Interviews were recorded using the Call Recorder App, uploaded to Google Drive, transcribed, and coded.

Surveys. Qualtrics was used to administer the Community Assessment of Military Perceived Support Survey (Appendix G; Conforte et al., 2017), the School Readiness Knowledge Survey (Appendix H), and the Parent Perceptions of Child Care Choices and Quality Survey (Appendix I; Raikes et al., 2005) before and after the intervention. Demographic data were collected only before the intervention using a researcher-created survey (Appendix K). Links to the pre- and postintervention surveys were texted and e-mailed to participants.

Table 5

Outcome Evaluation Data Collection and Analysis

Timing of collection	Quantitative instruments	Qualitative instruments	Data analysis
Research Question 4: To what degree did participants' perceived community support change from pre to post-intervention?			
Pre and postintervention; During phone consults	Community Assessment of Military Perceived Support Survey (Conforte et al., 2017; Appendix G)	Pre- and postintervention interview transcripts; phone consult transcripts	Descriptive coding/pattern coding Descriptive statistics/Wilcoxon signed-rank test
Research Question 5: To what extent did participants' school readiness knowledge change from pre to post-intervention?			
Pre- and postintervention; during phone consults	School Readiness Knowledge Survey (Appendix H)	Pre- and postintervention interview transcripts; phone consult transcripts	Descriptive coding/pattern coding Descriptive statistics/Wilcoxon signed-rank test
Research Question 6: How did participants' school readiness preferences change from pre- to postintervention?			
Pre- and postintervention; during phone consults	Parent Perceptions of Child Care Choices and Quality Survey (Raikes et al., 2005; Appendix I)	Pre- and postintervention interview transcripts; phone consult transcripts	Descriptive coding/pattern coding Descriptive statistics/Wilcoxon signed-rank test

Data Analysis

Following this study's convergent parallel design, data sets were analyzed separately and then compared and contrasted: Merging or integrating of data sets did not occur (Creswell & Clark, 2011). Credibility and trustworthiness were enhanced through triangulation across qualitative and quantitative data and member checking with select participants following data analysis but before mixed methods interpretation (Creswell & Clark, 2011; Krefting, 1991). Furthermore, an examination by colleagues following mixed methods interpretation was utilized

to ensure that the findings were free from researcher bias and errors and induced proper emphasis and detail (Creswell & Clark, 2011; Krefting, 1991).

Quantitative analysis. Quantitative data included attendance records and survey responses (Table 4 and Table 5). Attendance records addressed RQ1, or to what extent participants completed intervention activities. Answering RQ4 required data from the Community Assessment of Military Perceived Support Survey (Conforte et al., 2017); RQ5 used School Readiness Knowledge Survey results; and RQ6 utilized Parent Perceptions of Child Care Choices and Quality Survey responses (Raikes et al., 2005). Quantitative analysis included descriptive statistics, to understand data trends and distribution, and the Wilcoxon signed-rank test, a nonparametric statistical test that measured the significance of median differences between pre- and postintervention data (Laerd Statistics, 2020; Salkind, 2014). The Wilcoxon signed-rank test was selected because the normal distribution of the data could not be assumed with the study's small sample ($N = 8$). The Wilcoxon signed-rank test requires three test assumptions to be met: the independent variable has two related, or paired, sets of data; the dependent variable is measured at a ratio or ordinal level; and the distribution of differences between pre- and postintervention data must be approximately symmetrical (Laerd Statistics, 2020). These assumptions were met, thus confirming the appropriateness of this test.

Qualitative analysis. Descriptive and pattern coding were used to analyze qualitative data. Qualitative data included researcher debriefing notes, pre- and postintervention interview transcripts, phone consult transcripts, and follow-up e-mails (Table 4 and Table 5). A preliminary list of (deductive) codes was developed (Table 1 and Table 2), but data-driven (inductive) codes were also expected to arise during the first phase of analysis (Saldana, 2016). After data were recorded and transcribed, they were coded using the descriptive coding method. Descriptive coding was an appropriate first-round coding approach because it allowed for comparisons between data collected before, during, and after the intervention (Saldana, 2016). Also, it effectively incorporated the study's many data sources. Once data were coded using the

descriptive approach, they were categorized according to research questions for deeper analysis. Pattern coding, the second coding approach, synthesized the data. Descriptive codes were reconsidered and reorganized into a smaller number of more meaningful themes, leading to a deeper analysis of the qualitative data (Saldana, 2016).

Mixed methods interpretation. Quantitative and qualitative datasets that addressed the same topic or research question were triangulated to determine whether findings converged or diverged. For instance, Community Assessment of Military Perceived Support Survey data were juxtaposed with interview data on parent perceptions of military community support (Conforte et al., 2017). Also, to address RQ5, School Readiness Knowledge Survey data were compared to interview responses on school readiness knowledge. Furthermore, responses to interview questions on parent preferences for school readiness programs were analyzed alongside Perceptions of Child Care Choices and Quality Survey data (Raikes et al., 2005). A mixed methods interpretation of data is included in the analysis of each research question and the conclusion of Chapter 5 (Creswell & Clark, 2011).

Conclusion

The intervention's design was informed by this study's two theoretical frameworks (the family systems perspective and the ecological systems theory), the needs assessment conducted in the context of MCAS Yuma, and the intervention literature review. Furthermore, the modified conceptual framework introduced in Chapter 3, which incorporated the accommodation model for child care decisions was instrumental in identifying an intervention design most likely to result in a treatment effect for the population of primary caregiving parents from families of enlisted marines stationed at MCAS Yuma (R. Weber et al., 2018). This chapter outlined this dissertation's mixed methods convergent parallel research design, including the process and outcome evaluation research questions, driving this study. In Chapter 5, findings related to these research questions are presented and discussed.

Chapter 5: Findings and Discussion

Designed according to research literature and needs assessment empirical evidence, the informational intervention helped mitigate the adverse effects of a resource-constrained local context, a transient lifestyle, and other challenges military families face when preparing their children for kindergarten. This study's logic model and theory of treatment suggested that increasing parent's school readiness knowledge, coupled with enhanced community support, would increase parents' preferences for high-quality school readiness programs and lead to higher quality early learning opportunities for their children (Barker & Berry, 2009; Chaudry et al., 2010; Doty et al., 2016; Flake et al., 2009; Green et al., 2013; Waliski et al., 2012). Increasing participation in high-quality school readiness programs is consequential for military children, as it enhances their preparedness for kindergarten and thus bolsters their long-term school success (Barnett et al., 2016; Duncan & Magnuson, 2013; Heckman et al., 2010).

Chapter 4 introduced the intervention's process and outcome evaluation research questions and the mixed methods convergent parallel research design (Creswell & Clark, 2011). Now, Chapter 5 provides a qualitative, quantitative, and mixed methods analysis of intervention data collected in May and June 2019 according to the six research questions listed in the next section. Study limitations and implications for future research and practice are also discussed at the conclusion of Chapter 5.

Research Questions

Process Research Questions

RQ1: To what extent did participants complete intervention activities? Did the researcher deliver the program as intended?

RQ2: How did the research design alleviate or intensify contextual constraints that affect participation?

RQ3: What were participant perceptions of their intervention experience?

Outcome Research Questions

RQ4: To what degree did participants' perceived community support change from pre- to postintervention?

RQ5: To what extent did participants' school readiness knowledge change from pre- to postintervention?

RQ6: How did participants' school readiness preferences change from pre- to postintervention?

Sample Demographics

During recruitment, every participant was confirmed to be the primary caregiving parent of at least one military child aged 0–5 years and the spouse of an enlisted marine. A preintervention demographic survey collected additional information about the study's eight participants (Appendix K). Research identifies children of parents with low income, with low educational attainment, and who are young at the time of the birth of their first child to be at risk for poor school readiness (Flake et al., 2009; Green et al., 2013; Lester et al., 2016). Therefore, the survey collected data on these demographic attributes to determine whether participants might also be considered at risk (Table 6). Data on relocation (since birth of first child) and length of separation (since birth of first child), common aspects of military life, were also gathered.

Table 6

Demographic Characteristics of Sample

Demographic characteristic	*f*	%
Gender		
Female	8	100.0
Male	0	0.0
Family income		
$0–$25,000	0	0.0
$25,000–$50,000	7	87.5

$50,000–$75,000	0	0.0
$75,000+	1	12.5
Educational attainment		
Some high school	0	0.0
High school graduate	1	12.5
Some college credit	4	50.0
College graduate	3	37.5
Age in years (at birth of first child)		
18–25	5	50.0
26–30	2	25.0
31–40	1	12.5
Relocations (since birth of first child)		
0	4	50.0
1	0	0.0
2	2	25.0
3	2	25.0
Months of separation (since birth of first child)		
0–6	4	50.0
6–12	2	25.0
12–30	0	0.0
30+	2	25.0

Note. $N = 8$.

Process Evaluation

The following sections present findings for the study's three process evaluation research questions.

Research Question 1: Reach and Dose Delivered

Process evaluation elements of reach and dose delivered determined the extent to which the intervention was implemented according to its plan and the research design (Linnan & Steckler, 2002). Reach, or parents' participation in each intervention component, was measured using training session and phone consult attendance logs. A combination of communication

techniques, including text messages, e-mails, and phone calls, reminded participants of training sessions and were used to coordinate phone consults. Records confirm all eight participants participated in each required component of the intervention. Hence, data suggested the intervention satisfied the process evaluation element of reach.

Dose delivered corresponded to whether the intervention adequately exposed participants to the intervention's key content. Group trainings, phone consults, and follow-up e-mails represented opportunities for participants to receive the intervention's critical content. Descriptive and pattern coding were applied to the researcher's debriefing notes, phone consult transcripts, and follow-up e-mail exchanges to evaluate dose delivered. Codes aligned with the intervention content (Appendix P) such as early brain development and school readiness domains.

Group training sessions. Two 1.5-hr in-person trainings were offered in late May and early June of 2019 at an on-base community center. Each participant received a resource folder that included note-taking packets, a description of program quality measures, and lists of local and state school readiness resources. Parents also received Arizona's First Things First child care program quality checklist and a National Association for the Education of Young Children handout about characteristics of high-quality preschool programs (First Things First, 2019; National Association for the Education of Young Children, 2019). The researcher used a Google Slides presentation to deliver the content, introduce activities, and facilitate discussions (Appendix P provides an overview of the training content). Throughout the training, participants recorded questions or additional resource requests, which the researcher collected after the training and used to guide discussion during the phone consults.

Session 1 was held from 9:30 to 11:00 a.m. on May 23, 2019, with four participants in attendance. Session 2 occurred on June 4, 2019, also lasted from 9:30 to 11:00 a.m., and had four different parents in attendance. In both sessions, all participants shared past experiences and current challenges, posed questions, were attentive to the presentation, and participated in all

activities. All core content was covered, but some activities were modified to offset the time required for both groups to finish relevant discussions. For example, for the sake of time, rather than having participants write reflections and then share these with the others, parents instead discussed what they learned.

Phone consults. The individualized phone consults reviewed training content, explored school readiness opportunities, discussed concerns, problem-solved, and planned for the future (Appendix M). Notes participants took during the training provided a starting point for the consults (Each consult took a unique form: Transcripts revealed that the researcher modified discussion based on participant needs. For instance, Participant 7 was interested in school readiness opportunities in other contexts due to her upcoming move to another state (Participant 7, phone consult, June 13, 2019), so the phone consult explored possible public preschool options and other resources in this new location. During another call, Participant 2 described the difficulties she had faced recently when searching for a preschool in Yuma:

> I called First Things First. They are not doing the preschool at Raleigh [Elementary] this year . . . or they're not doing the scholarships. . . . So it's only at Pecan Grove [Elementary]. . . . I said well, can I apply? And they said well we don't have the papers yet and then I called literally six hours later and it was full. There was a waiting list you could get on. It took about six hours, and it was gone. (postintervention interview, June 14, 2019)

The researcher and Participant 2 problem-solved and identified alternative high-quality programs and financial assistance resources.

Table 7).

Each consult took a unique form: Transcripts revealed that the researcher modified discussion based on participant needs. For instance, Participant 7 was interested in school readiness opportunities in other contexts due to her upcoming move to another state (Participant 7, phone consult, June 13, 2019), so the phone consult explored possible public preschool options and other resources in this new location. During another call, Participant 2 described the difficulties she had faced recently when searching for a preschool in Yuma:

> I called First Things First. They are not doing the preschool at Raleigh [Elementary] this year . . . or they're not doing the scholarships. . . . So it's only at Pecan Grove [Elementary]. . . . I said well, can I apply? And they said well we don't have the papers yet and then I called literally six hours later and it was full. There was a waiting list you could get on. It took about six hours, and it was gone. (postintervention interview, June 14, 2019)

The researcher and Participant 2 problem-solved and identified alternative high-quality programs and financial assistance resources.

Table 7

Phone Consult Topics Requested by Participants

Topic	Number of requests
Resources to prepare child for school	11
Local preschools	8
Preschool programs in other states	3
Preschool scholarships	2
Speech services	2

Following the phone consult, the researcher e-mailed the participant additional information or resources, if requested. Again, these were individualized, so e-mail content varied between participants (Table 8). Two participants indicated that they needed no other resources; therefore only six parents received a follow-up e-mail. In sum, the review of researcher debriefing notes from each training, phone consult topics requested by participants, phone consult transcripts, and follow-up e-mails suggests that the dose delivered element was satisfied in this study.

Table 8

Participant Requests for Additional Resources

Topic	Number of requests
More information on training content (e.g., brain development)	11
Early learning opportunities in other states (e.g., link to Child Find website)	6

Local resources (e.g., Yuma Parks and Recreation)	4
Military resources (e.g., New Parent Support)	4
Tools to assist finding high-quality programs (e.g., quality checklists)	4

Research Question 2: Context

The process evaluation component of context corresponds to the intervention's ability to address contextual constraints that could affect participation (Linnan & Steckler, 2002). Known barriers to parent participation include child care, transportation, time commitment, employment (for the participant or the participant's spouse), and location of training (Duppong-Hurley et al., 2016; Heath et al., 2017). Furthermore, DiNallo et al. (2016) found that military families face additional obstacles such as low program awareness, negative stigma associated with participation, and mixed support from military leadership. The intervention's design aimed to alleviate these barriers to participation by providing free child care and ensuring that the group training and phone consults were scheduled at the convenience of the participants. Transcripts of pre- and postintervention interviews and phone consults were analyzed to ascertain the intervention's success in addressing contextual constraints. Qualitative data were coded using descriptive coding followed by pattern coding. Predetermined codes, such as "child care" and "employment," were determined according to contextual constraints found in the literature and needs assessment (Table 1). No codes arose inductively during descriptive coding for this research question. Pattern coding revealed three significant ways that the study alleviated contextual constraints, according to parents: offering free child care, an agreeable time and location, and the convenience of the phone consult.

Child care was reported as the most important factor in parent participation. While only four out of eight participants took advantage of the free off-site child care, seven participants commented on the importance of it being available. Participant 1 remarked that child care was "a big thing because otherwise, I wouldn't have been able to come or she [her child] would have had to come and sit with me" (postintervention interview, June 13, 2019). Participant 5

mentioned that free child care saved her money, and without this financial assistance she may not have attended (postintervention interview, June 15, 2019). Furthermore, Participant 6 recognized that the coordination of care by the researcher reduced the effort required by her to attend (postintervention interview, June 12, 2019). Participant 8, whose husband was deployed, agreed that child care was critical for her attendance: "I would love to attend many, many things in terms of helping my kids but I also need to have someone help me watch them when my husband is deployed" (postintervention interview, June 13, 2019). Even when a service member is not deployed, frequently changing work schedules, which are typical of military service, can easily derail the plans of the primary caregiving parent (Participants 1 and 2, training, May 29, 2019). Participant 1 explained, "My husband works in shifts so one week he could pick her up multiple times and then the next week he is only around two days to help pick up kids" (training, May 23, 2019). The unpredictability of the service members' schedules was another reason why child care was essential for attendance of the primary caregiving parents.

Participants also reported that the timing and location of the training increased the likelihood that they could and would participate. For example, parents mentioned how a 9:30 a.m. start gave them adequate time to drop their children off at the child care site and reach the training, and the 11:00 a.m. departure allowed time for them to return home, serve lunch, and put their children down for a nap. Participant 5 commented, "My daughter naps closer to the afternoon, so morning was convenient" (postintervention interview, June 15, 2019). Furthermore, two participants reported that the training location made their participation more likely. Those parents who lived on base could easily walk to the community center where the training was held, and because the community so frequently uses the center, participants who lived off base were familiar with its location and could easily find it (Participants 5 and 7). Parents also reported that phone consults scheduled at their convenience made their intervention participation more likely. Participant 7 recognized the ease of an over-the-phone consult: "A phone call is easy because, like I said, I am sitting in a barbershop!" (postintervention interview, June 13, 2019). In conclusion, data suggests that providing free child care and ensuring that the

time and location of the training and the time of the phone consult was scheduled at the convenience of the participant alleviated the most significant participation barriers for this sample.

Research Question 3: Participant Perceptions

Phone consult and postintervention interview data were examined to describe participant perceptions of the intervention experience. Predetermined codes (Table 1) were developed according to postintervention interview questions. For example, "usefulness" and "relevance" were codes developed from the question, "How did you perceive the usefulness or relevance of the phone consult and group session?" (Appendix O). Unexpected codes also emerged during the first round of coding. For instance, "researcher–participant rapport" and "training length" emerged inductively from the qualitative data. After descriptive coding, pattern coding revealed the themes of perceptions of instructional design, applicability to participant, and intervention climate (Table 9; Saldana, 2016).

Table 9

Participant Perception Themes

Theme	Codes
Perceptions of instructional design	Teaching strategies (presentation, resource folder, games, videos) Group dynamic Personalized phone consult Training format (length of training, group size)
Perceptions of intervention's applicability to participant	Usefulness to parent Relevance to family's situation
Impact of intervention climate on parent's perception of experience	Participant–researcher rapport Flexibility of intervention Responsiveness of researcher

Parents perceived the in-person training group dynamic, the personalization of the phone consult, and various teaching strategies (presentation, a resource folder, games, and videos) as the instructional approaches most beneficial to their intervention experiences. Seven participants

perceived attending the training with other parents as the most positive aspect of the instructional design. Participant 3 spoke of the advantages of a group setting:

> I think hearing from the other moms and like knowing what they're going through . . . it was interesting to learn of like the problems I might face in the future and how I can deal with them, so it was helpful to be in a group. (postintervention interview, June 12, 2019)

Five parents also reported that the personalization of the phone consult was beneficial to their experience. Participant 8 remarked, "Talking to you one on one I can give you my individual needs which is nice" (postintervention interview, June 13, 2019). Participant 7 also felt that she benefited from the phone consult:

> I like these phone conversations. It's a casual conversation style . . . It's given me time to sort of go over things and like either things I had questions about before I either found the answers myself and figured out or things that I thought I didn't have questions about turns out I did. (postintervention interview, June 13, 2019)

Lastly, the presentation, resource folder, games, and videos were perceived to enhance learning. For instance, Participants 2, 4, 5, 7, and 8 reported that the resource folder was useful; Participant 2 said:

> I was at a loss, and I was looking through social media and Google to try to figure things out, whereas you lined it all up. You gave me the right numbers. Whereas before, I kind of like scrambling trying to grab at everything. (postintervention interview, June 14, 2019)

Three parents found the games and videos embedded in training effective. Participant 3 said, "I thought the games were helpful . . . it helped explain the concepts a little bit more" (postintervention interview, June 12, 2019). With the videos and games interspersed throughout the training, Participant 6 remarked, "I honestly thought it was broken up nice" (postintervention interview, June 12, 2019). In sum, participants perceived many elements of the intervention's instructional design as contributing positively to their intervention experience.

Data suggested that participants from a wide variety of family circumstances and backgrounds perceived the intervention to be personally applicable. For instance, Participant 2, a

mother of three who has experience enrolling her children in school readiness programs in other contexts, was having difficulty finding care for her children in Yuma. However, intervention participation proved useful for her: "Three months ago I was at a complete loss, but at least now I have a good direction on where I can go" (postintervention interview, June 14, 2019). Furthermore, Participant 3, parent to a 1.5-year-old, had limited knowledge of school readiness and was skeptical of the intervention's relevance and usefulness before participating:

> At first, I was like, oh my son is a little bit young. Will I get anything out of it? But I thought everything that you were saying like at the training it was actually really helpful even though he won't be going to preschool for a quite a while you know . . . just to start thinking about it is helpful. . . . To already have a guide even though he's still this young. (postintervention interview, June 12, 2019)

Participant 1 shared her opinion on the applicability of the intervention to a wider audience: "This is a program that could go nationwide to all bases. It would be hugely beneficial whether it's new parents or parents that are new to that specific base . . . if it's in a different state and things are different" (postintervention interview, June 13, 2019). In sum, the data suggest that participants of all backgrounds found the intervention applicable to their families.

Interview data also suggested that the intervention's climate had an impact on parents' perceptions of the experience. Participant 2 spoke about the significance of program flexibility and researcher responsiveness to her positive perception of the intervention experience:

> You [the researcher] were more willing to go around anything that we needed to make it work, which with moms, especially with working spouses, it's almost impossible to get a set time or a set place. You were really willing to make it work . . . you made it very accessible for me. (postintervention interview, June 14, 2019)

A supportive and trusting rapport between researcher and participant also contributed to parent perceptions of the intervention. Participant 7 said, "You're [the researcher is] very easy to talk to so that's really helpful to me. It's comfortable, you know, to talk" (postintervention interview, June 13, 2019). Participant 6 had similar perceptions:

> It was great because it made you more personable and not just like a texting stranger . . . you knew what your personality was going to be like and at the training like it was the same comfortable environment. It was informal . . . I liked the intimate setting so you felt more comfortable if you wanted to say anything or bring anything up. I think it is great what you did. (postintervention interview, June 12, 2019)

In sum, data suggested that participants perceived their intervention experiences positively, in part, due to the training climate.

According to process evaluation research question analysis, the elements of reach, dose delivered, context, and participant perceptions were satisfied, suggesting the intervention was implemented with fidelity (Baranowski & Stables, 2000; Dusenbury et al., 2003; Linnan & Steckler, 2002). This is significant, as researchers including Baranowski and Stables (2000) and Linnan and Steckler (2002) suggest that outcomes cannot be attributed to an intervention without first achieving fidelity of implementation. Next, outcome evaluation findings are presented.

Outcome Evaluation

In accordance with this study's mixed methods convergent parallel research design, qualitative and quantitative data were first analyzed separately and then compared side by side (Creswell & Clark, 2011). The following sections therefore present qualitative and quantitative findings, as well as a mixed methods interpretation, for each outcome evaluation question.

Research Question 4: Community Support

RQ4 sought to isolate the intervention's contribution to participant perception of community support. Qualitative data from phone consult transcripts and pre- and postintervention interviews and quantitative data from pre- and postintervention Community Assessment of Military Perceived Support Survey responses provided the information required for analysis (Conforte et al., 2017).

Qualitative analysis. Phone consults and pre- and postintervention interviews were first coded using a descriptive approach with predetermined codes such as "connections with others" and "feeling help is available." Codes were developed to allow for triangulation during mixed

methods analysis (Creswell & Clark, 2011; Saldana, 2016). For example, the Community Assessment of Military Perceived Support Survey included statements such as, "I feel a collective sense of community with others in the military community," and, "I DO NOT feel connected to other military families" (Conforte et al., 2017). In alignment with the survey, a postintervention interview question was posed on the same topic: "To what extent did your participation make you feel more connected to other members of the military or local community?" Hence, a "connections with others" code was developed. In the second cycle, pattern coding found two primary themes in the data: community connections (defined, following the survey questions, as connections with others, feeling understood or valued, and common purpose) and community assistance (defined, according to the survey questions, as help from military community to meet needs of family; Table 10).

Table 10

Community Support Themes

Theme	Codes
Community connections	Connections with others Feeling understood or valued Common purpose
Community assistance	Off-base/local resources On-base/military resources Feeling help is available

According to the qualitative data, before intervention participation, parents generally felt supported by the military community. In particular, they felt a strong sense of connection with other parents who had similarly aged children. Participant 8 said, "The military community has been really great for me in terms of just finding camaraderie . . . I can find other women that have similar situations, similar aged kids . . . you meet new people just so easily" (postintervention interview, June 13, 2019).

When asked about their perceptions of community support as a result of intervention participation, participants said that they felt more connected with other military parents

(Participants 2, 3, 4, 5, and 7). Participant 4 remarked, "That was so nice to meet other parents going through similar things. . . . It was really nice because we could all say yes, you understand, been there done that" (postintervention interview, June 3, 2019). Participant 7 suggested that the connections made with parents during the training could lead to future collaboration:

> I talked to her little bit after and I feel like she has a young kid as well. I would feel comfortable going to her to kind of like maybe, "Hey I want to go look at this school. Do you want to come with me?" (postintervention interview, June 13, 2019)

Furthermore, Participant 2 realized during the training that other military parents were having experiences similar to hers:

> On Facebook, when some people talk, they act like they've got it completely figured out and at least it [the intervention] shows that you're not totally by yourself. There's a ton of things that not everybody knows, and it doesn't matter if you are a corporal's wife or a gunny's wife. There's always something that somebody else can help you with and show you, so that was nice. (postintervention interview, June 14, 2019)

Overall, qualitative data suggested that some participants perceived a heightened sense of connection with others following intervention participation.

Participants were critical, before and after the intervention, of school readiness community assistance. Parents perceived military school readiness resources as inadequate, especially for 3–5-year-olds. Participant 7, an active community volunteer, reflected on programs currently available:

> I feel like there is good support for infants because they have all the new parent programs, the mom programs, infant programs, and then it just kind of . . . skips to grade school . . . the rest you've got to figure it out. . . . I could be wrong but then again, I'm on base quite a bit, and I'm interacting with people . . . but none of nothing like that has ever come up. (postintervention interview, June 13, 2019)

Participant 4 described the effect of insufficient community assistance when searching for a prekindergarten program for her son:

> All they do is just refer you to the Child Development Center. . . . I want to know about pre-Ks, and nobody could give me an answer because the school liaison only does K through 12. . . . So that was a big struggle for me when I moved here . . . nobody wanted to help, and nobody knew how to help . . . so I didn't even know what programs were

> available . . . I had to like just walk into buildings and be like, is this where I go? (postintervention interview, June 3, 2019)

Participant 2 echoed this frustration when she said, "Most people are just lost, just completely . . . and if there's anything pre-K you're out of luck" (postintervention interview, June 14, 2019). Participant 1 suggested how additional school readiness support could fill the current resource gap:

> It would have been a big help if there would have been someone, you know, that could have given us more educational information versus just asking the wives . . . I think it would have been really helpful and made it a little less stressful. Also, so that I didn't have to go hunt it all down myself . . . It would have been nice if someone would have been like ok, you know this is all the information you need, these are the schools we recommend, or however. It would have saved me probably many hours Googling and figuring things out. (postintervention interview, June 13, 2019)

While the majority of parents (Participants 1, 2, 4, 7, and 8) expressed frustration with the current school readiness support structure, intervention participation made them hopeful. Participant 3 said that the intervention increased her feelings that school readiness help was available and accessible. She simply said, "It's nice to know that there are people who are willing to help out" (Participant 3, postintervention interview, June 12, 2019).

This dissertation's literature review and needs assessment empirical findings suggested that community support buffers military families from hardship, improves family adjustment, reduces stress, improves mental health, and bolsters child outcomes (Barker & Berry, 2009; Conforte et al., 2017; Doty et al., 2016; Flake et al., 2009; Green et al., 2013; Waliski et al., 2012). Data for RQ4 suggest that parents feel generally supported by the military community but find school readiness support and resources, specifically, to be inadequate. As such, the data illuminated an unmet need of enlisted military families—increased support for families as they prepare their children for kindergarten.

Quantitative and mixed methods analysis. The Community Assessment of Military Perceived Support Survey (Appendix G) was used to evaluate the participants' perceived

community support before and after the intervention (Conforte et al., 2017). The survey required parents to agree or disagree with 25 dichotomous statements, producing an aggregate score for which higher values correspond to higher perceived community support. Data from Participants 1 and 5 were omitted from analysis due to nonresponse ($n = 6$). A Wilcoxon signed-rank test did not find the difference ($Mdn = 23.5$) between the preintervention median ($Mdn = –0.5$) and the postintervention median ($Mdn = 24$) to be statistically significant ($z = –0.68$, $p = .496$). Therefore, the null hypothesis that the difference between pre- and postintervention median values is 0 must be retained. In other words, there was no statistically significant change in participant perceptions of community support from before the intervention to after the intervention (Laerd Statistics, 2020). While the quantitative analysis found no significant changes in perceived community support, qualitative analysis suggested intervention participation increased perceived community support for many participants. Therefore, the mixed methods analysis is inconclusive for RQ4. Yet qualitative data alignment with the dissertation's literature review and needs assessment empirical findings, prolonged and repeated participant observations, triangulation of data sources, peer examination of data, and deep descriptions of context, participants, and research methods suggest that the qualitative findings are trustworthy (Krefting, 1991).

Research Question 5: School Readiness Knowledge

RQ5 examined the intervention's contribution to school readiness knowledge. Qualitative data from phone consults and pre- and postintervention interviews and quantitative data from School Readiness Knowledge Survey responses provided the necessary information for a mixed methods analysis.

Qualitative analysis. Descriptive coding of phone consult and pre- and postintervention interview data utilized predetermined codes derived from the intervention's content (Appendix P) and the School Readiness Knowledge Survey (Appendix H). For example, the "quality measures" code reflected School Readiness Knowledge Survey questions ("What is Arizona's

Quality First program?") and intervention content (introduction of accreditation, licensure, and Quality First). Added inductively during the first cycle of analysis was a "relocation" code that captured data on moving and the differences between states or duty stations. Next, pattern coding suggested two themes corresponding to areas where school readiness knowledge likely increased: school readiness programs and early childhood development (Table 11).

Table 11

School Readiness Knowledge Themes

Theme	Codes
School readiness programs	High-quality program characteristics Measures of quality (e.g., accreditation, licensure) Resource awareness Relocation (e.g., state differences)
Early childhood development	Early brain development (e.g., toxic stress, relationships) Domains of early learning (e.g., social-emotional, cognitive)

Overall, the eight participants varied in their awareness of school readiness topics before the intervention. Three participants (Participants 5, 6, and 8) had either completed coursework in early childhood education or had work experience in an accredited child care center. Nevertheless, they were unaware of some local resources and state regulations, such as the birthday cutoff for kindergarten entry. Participant 6 explained, "I haven't really gotten into any of that research yet" (preintervention interview, May 31, 2019), since her child was still very young.

The remaining five participants (Participants 1, 2, 3, 4, and 7) had no formal education or training on school readiness topics. Three mothers (Participants 3, 4, and 7) described their school readiness knowledge as basic. Mother to a 1-year-old, Participant 3 said, "I'm probably just starting to learn about" (preintervention interview, May 22, 2019) child development. Participant 4 exposed her limited school readiness knowledge when describing her recent experience of visiting prekindergarten programs: "I don't know what other options are . . . I just picked the school and walked in . . . I didn't really do much research on any of it"

(preintervention interview, May 22, 2019). Participants 1 and 2 had prior experience with early childhood resources when their now-elementary-aged children were younger. Only recently arrived in Yuma, they both perceived their school readiness knowledge to have limited applicability in their new context. Participant 2, who had moved from Michigan 7 months earlier, said, "We know nothing [about Yuma school readiness programs]. . . . We were back at home when she [her oldest child] was able to go to preschool so I knew all of it . . . it was easy" (preintervention interview, May 20, 2019). Participant 4, a Texas native, observed the differences in school readiness resources: "I guess they do it differently here than in Texas. We moved here in 2016, but my son was 2 so we weren't even thinking about school (preintervention interview, May 22, 2019).

After intervention participation, participants most frequently cited school readiness program knowledge, especially quality measures and local and state differences, as an area of significant learning. Seven participants (Participants 1, 2, 3, 4, 6, 7, and 8) reported that their knowledge of quality measures (e.g., accreditation, licensure, and Arizona's Quality First program) increased due to intervention participation. For Participant 2, school readiness program quality measures were new to her:

> I had no idea of any of the ratings that you had talked about . . . so now the very first thing that I look at, I go and look for the accredited or the Quality First. I go for that whereas before I had no idea. It was just kind of I looked at reviews and tried to see what other moms said. (postintervention interview, June 14, 2019)

Also previously unaware of school readiness program quality measures, Participant 1 described her newfound understanding of preschool quality:

> I didn't know that for preschools there is like official grading and stuff. I just assumed that didn't start until you actually get into kindergarten and elementary and all that. I thought that was really good to know. That was new information for me . . . It's something I'd never thought of. . . . But thinking about it makes total sense to make sure kids are learning what they're supposed to be learning. (postintervention interview, June 13, 2019)

Surprising to at least four participants was the variation in school readiness resources, including public preschool options, between states (Participants 4, 6, 7, and 8). "Things I didn't consider, like schoolwise, you know little things that we should be looking for when we PCS [permanent change of station] . . . I didn't know that every state wasn't like Arizona," said Participant 8 (phone consult, June 13, 2019). Participant 7 also realized that resources were not uniform across duty stations: "That's another thing I learned. Actually, I thought all pre-K you had to pay for it. I thought the public school system just included kindergarten to 12th grade everywhere" (phone consult, June 13, 2019). In sum, data suggested that participants increased their knowledge, especially about school readiness program quality measures and resource differences between contexts.

Early childhood development knowledge also increased, according to four participants (Participants 2, 3, 5, and 7). Participant 5 said that learning about early brain development "definitely sparked my interest a little bit more and so I am working on that with my children at home" (postintervention interview, June 15, 2019). Motivated by her new knowledge, Participant 2 intended to devote more resources to her child's development:

> As weird as this sounds the whole brain thing that you were talking about like all the development and how fast and everything . . . that's what really stuck with me and made me want to push more to get it done and less to be like, "Oh they are alright." (postintervention interview, June 14, 2019)

In conclusion, qualitative data suggested intervention participation led to increased school readiness knowledge for all intervention participants. While each parent's knowledge grew uniquely according to her preintervention knowledge and experience, each increased her overall school readiness expertise between pre- and postintervention. The finding that school readiness program knowledge, specifically quality measures, improved from pre- to postintervention aligns with the literature, which suggests that parents are mostly unaware of quality measures and thus rarely use resources such as Arizona's First Things First (Bassok et

al., 2018). Furthermore, by not using quality data and typically relying on word-of-mouth recommendations, parents frequently overrate school readiness programs, thus jeopardizing the quality of their children's education (Bassok et al., 2018; Dechausay & Anzelone, 2016; Forry et al., 2014). Therefore, these findings suggested increased awareness of quality measures may lead parents to use available tools to more accurately assess program quality.

Quantitative and mixed methods analysis. The researcher-developed four-question School Readiness Knowledge Survey (Appendix H) measured participant school readiness knowledge before and after the intervention. The four-question survey addressed topics delivered during the intervention: early brain development, school readiness domains, high-quality preschool characteristics, and quality measures. Possible scores ranged from 0 to 4, with 4 being the highest level of knowledge and 0 being the least. Data for Participants 5 and 8 were removed due to nonresponse ($n = 6$). Survey scores ranged from 0 to 3 correct answers before the intervention and 3 to 4 correct answers after the intervention. A Wilcoxon signed-rank test did not find the difference ($Mdn = 1$) between the preintervention median ($Mdn = 3$) and the postintervention median ($Mdn = 4$) to be statistically significant ($z = -1.84$, $p = .066$). Therefore, the null hypothesis that the difference between pre- and postintervention median values is 0 must be retained. In other words, there was no statistically significant change in participant school readiness knowledge from before the intervention to after the intervention (Laerd Statistics, 2020).

While the quantitative analysis found no significant change in school readiness knowledge, qualitative analysis suggested that intervention participation increased school readiness knowledge for all participants. Therefore, the mixed methods analysis is inconclusive for RQ5. Yet qualitative data alignment with the dissertation's literature review and needs assessment empirical findings, prolonged and repeated participant observations, triangulation of data sources, peer examination of data, and deep descriptions of context, participants, and research methods suggest that the qualitative findings are trustworthy (Krefting, 1991).

Furthermore, the study's theory of treatment (Appendix F) identified changes in parental school readiness knowledge as the primary mechanism responsible for the intervention's treatment effect, or change in parent preferences (Chaudry et al., 2010; Leviton & Lipsey, 2007). With all parents ($n = 8$) reporting increased school readiness knowledge, RQ6 analysis of parent preferences includes weighing the evidence of increased knowledge leading to changed preferences.

Research Question 6: School Readiness Preferences

Using data from phone consults, pre- and postintervention interviews, and the Parent Perceptions of Child Care Choices and Quality Survey, this mixed methods analysis sought to determine whether parental preferences for high-quality school readiness programs had changed due to intervention participation (Raikes et al., 2005).

Qualitative analysis. Descriptive coding of phone consult and pre- and postintervention interview data utilized predetermined codes derived from Parent Perceptions of Child Care Choices and Quality Survey statements. Codes included "location," "support of learning," and "shared values" for school readiness programs (Table 2). Several codes were also developed inductively, including the use of "word of mouth" in school readiness decisions. In the second coding cycle, three patterns of parent preferences emerged: school readiness program characteristics, program quality, and decision-making approaches (Table 12).

Table 12

School Readiness Preference Themes

Theme	Codes
Preferences according to school readiness program characteristics	Religious affiliation Shared values Trustworthiness Support of learning Logistics (e.g., cost, location, hours)

Preferences for high-quality programs	Prioritization of quality Methods to search, evaluate, and select a program Future preschool enrollment plans
Preferences for decision- making approaches	Word of mouth Use of quality indicators to evaluate program Researching programs Parent intent to change decision-making approach

Preferences according to school readiness program characteristics. In preintervention interviews, all parents stated that they were interested in sending their children to preschool, but only Participants 1, 6, and 8 verbalized the attributes of school readiness programs they preferred. For instance, Participants 6 and 8 stated their preference for a religious school readiness program. Participant 6 said:

> I am Christian so I definitely am wanting to shelter her in kind of that religious way, but I mean not to the point where I'm not going to send her somewhere because of that. . . . I haven't really thought too much further than that for her. (preintervention interview, May 31, 2019).

Participant 8 explained that a school readiness program with shared values would be preferable: "The best bet would probably be a private school maybe like Yuma Lutheran or . . . Immaculate Conception . . . [they have] the same morals and ethics [as I do]" (preintervention interview, June 1, 2019). Selecting a trustworthy school readiness program was also a priority for Participants 6 and 8. Participant 8 was concerned about sending her son to preschool, because "no one can take care of your kid the way that you do" (preintervention interview, June 1, 2019). Participant 6 simply stated that preschools "make me nervous in Yuma" (preintervention interview, May 31, 2019). A program's focus on learning was important to Participant 8:

> I guess what I'm looking for in a school is a place that keeps him occupied at his level. I think in order to do that [I need to] find someplace with a low ratio of kids . . . he just needs to be challenged. (preintervention interview, June 1, 2019)

Participant 1 was the only parent to mention logistical concerns as impacting her preference for school readiness programs:

> Trying to figure out transportation—that is my biggest issue right now . . . [if] they [her kids] have to be picked up at the same time but I have to go clear across town. I am not going to not be able to get them at the same time. (phone consult, June 13, 2019).

In sum, preintervention qualitative data suggested that some parents had preferences for specific school readiness program characteristics, but the majority of parents ($n = 5$) in this sample expressed no preference. The lack of preference for the majority of participants mirrors findings that parents had low school readiness knowledge before the intervention. However, participants with established preferences reported that their preferences for high-quality school readiness programs also increased. While there were no indications that the preferences held by Participants 1, 6, and 8 before the intervention were unimportant after the intervention, data indicated that the priority parents gave to these initial school readiness program preferences may have changed. For example, Participant 6 indicated that program quality knowledge developed during the intervention would influence her choices, but only to a degree. Religion was her priority and would supersede quality factors: "I will definitely, you know ask, the whole accreditation, Quality First question, but I mean most of my questions would be like more morals like what they teach, what they believe" (postintervention interview, June 12, 2019). Therefore, data suggested that the intervention was able to change quality preferences for parents with and without preintervention preferences for other school readiness program characteristics.

Preferences for high-quality programs. None of the participants stated in preintervention data that they preferred high-quality school readiness programs. However, following the intervention, all eight participants reported that their prioritization of program quality had increased. For instance, Participant 4 remarked on the increased attention she will pay to program quality: "Now when I actually go look . . . I'll look at which ones are accredited . . . it definitely makes me more picky about where I want to send [her child]. Like I used to just say I'll go wherever . . .now I am looking into stuff" (postintervention interview, June 3, 2019). Participant 8 also described changes in her preference for high-quality school readiness programs:

> Overall not settling would be the main takeaway . . . you don't want to settle for the mediocre. You want the best care for your child . . . I'm definitely looking for that accredited place now. I am not going to settle for something that's just licensed. (postintervention interview, June 13, 2019)

In sum, all parents reported increased preference for high-quality school readiness programs due to intervention participation.

Preferences for decision-making approaches. Parents confirmed that they relied on word of mouth or social media to make school readiness decisions before intervention. For instance, when asked how she selected a preschool for her eldest child, Participant 1 said:

> I think one of the first things I did was hop on a spouse page and ask for recommendations . . . and kind of looking through Google and seeing different reviews for places and then we took a tour and stuff and that's kind of how we ended up with it. (preintervention interview, May 20, 2019)

After intervention participation, parents indicated that their newfound understanding of program quality would shape how they search, evaluate, and select school readiness opportunities in the future. For example, Participant 7 reflected on how learning about Arizona's Quality First program will impact her decision-making:

> I love now that there's the standard resource for each state that is more helpful and is more concrete of how good a program is and the funding and the licensing and all that . . . I had no idea that was out there and that will change how I make decisions. I'll make a more informed decision. (postintervention interview, June 13, 2019)

Postintervention data suggested word of mouth would still play a role in the search for and evaluation of school readiness programs, but to a lesser degree due to newfound knowledge of quality measures. Participant 7 discussed the downgraded role of word of mouth:

> I will rely less on the standard Google reviews. I usually just go into Google [and search] "top rated preschools" . . . and you just get a lot of personal statements, but now it's kind of like those are sort of like way lower on my list of things to look at. I still would like to consider them. (postintervention interview, June 13, 2019)

Participant 4 said that she would pay more attention to program quality going forward, but she also concluded that word of mouth "is very important. . . . I like to hear what they have to say

about the program. . . . I like to hear the different opinions from everybody" (postintervention interview, June 2, 2019).

In conclusion, postintervention data indicated that participant preferences had been modified, or newly developed, due to the knowledge they gained during the intervention. Participants reported that their preference for high-quality school readiness opportunities had increased, and, therefore, new methods and criteria for searching, evaluating, and selecting a school readiness programs would be used. Parents planned to increase the use of quality indicators, but they also noted word of mouth would continue to influence their selection of school readiness opportunities, albeit in a more limited role. Preferences for program characteristics, such as location or religious affiliation, would also continue to influence program selection, although quality would now compete with these preferences. These findings align with the accommodation model of child care decisions, which posits that parental preferences, family, and community factors create the context within which parents evaluate their opportunities, constraints, and barriers to school readiness choices (Chaudry et al., 2010). While parent preferences for school readiness programs are amenable to change through community interventions, decision-making also incorporates many other family and community factors (Chaudry et al., 2010; R. Weber, 2011).

Quantitative analysis. The Parent Perceptions of Child Care Choices and Quality Survey (Appendix I) was used to measure parent preferences for school readiness programs before and after intervention participation (Raikes et al., 2005). Participants rated the importance to their school readiness choices of 23 statements on a Likert scale of 1 to 5, with 5 being most important and 1 being least important. Participant 5's data were omitted from this analysis due to nonresponse on postintervention surveys (n = 7). Survey statements were categorized to match themes found in RQ6 qualitative data (***Table 12***).

Preferences according to school readiness program characteristics. Four survey statements were used to examine parent preferences for school readiness program characteristics. The maximum possible score was 20, which would indicate a high preference for programs that provided the hours, cost, subsidies, and location preferred by parents. A Wilcoxon signed-rank test did not find the difference ($Mdn = 0$) between the preintervention median ($Mdn = 14$) and the postintervention median ($Mdn = 15$) to be statistically significant ($z = –0.84$, $p = .399$). Therefore, the null hypothesis that the difference between pre- and postintervention median values is 0 must be retained. In other words, there was no statistically significant change in participant preferences according to school readiness program characteristics from before the intervention to after the intervention (Laerd Statistics, 2020).

Table 13

Parent Perceptions of Child Care Choices and Quality Survey Themes and Statements

Theme	Survey statements
Preferences according to school readiness program characteristics	Flexible or convenient hours. The provider accepts child care subsidy payments. A convenient location. The cost.
Preferences for high-quality programs	The provider offers stimulating activities or programs. Physical facilities and equipment for play and learning. Training or credentials of the provider. The number of children per provider. The provider emphasizes school academics. The provider is accredited.
Preferences for decision-making approach	The provider had a reputation for good care. The provider was recommended by a family member or friend. The provider is someone you know and trust.

Preferences for high-quality programs. Participants evaluated their preferences for high-quality school readiness programs in six survey statements. The highest possible score was 30; the greater the score, the higher the preference for program quality. Total scores ranged from 21

to 30 on the preintervention survey and from 22 to 28 on the postintervention survey. A Wilcoxon signed-rank test did not find the difference ($Mdn = 1.0$) between the preintervention median ($Mdn = 23$) and the postintervention median ($Mdn = 26$) to be statistically significant ($z = -1.2$, $p = .230$). Therefore, the null hypothesis that the difference in medians between pre- and postintervention values is 0 must be retained. In other words, there was no statistically significant change in preferences for high-quality programs from before the intervention to after the intervention (Laerd Statistics, 2020).

Preferences for decision-making approach. Participants evaluated their preference for decision-making approaches in three survey statements. Based on the literature and needs assessment findings, military families commonly rely on word of mouth to judge school readiness program quality and frequently overrate programs; therefore, understanding whether parent preferences for this approach changed was important (Bassok et al., 2018). The maximum possible score was 15 (higher score indicates a greater preference for the word-of-mouth decision-making approach). Actual total scores ranged from 6 to 11 in the preintervention survey and from 6 to 10 in the postintervention survey. A Wilcoxon signed-rank test did not find the difference ($Mdn = -1.0$) between the preintervention median ($Mdn = 8$) and the postintervention median ($Mdn = 7$) to be statistically significant ($z = -2.12$, $p = .034$). Therefore, the null hypothesis that the difference in medians between pre- and postintervention values is 0 must be retained. In other words, there was no statistically significant change in participant preference for decision-making approaches from before the intervention to after the intervention (Laerd Statistics, 2020).

Mixed methods interpretation. Again, qualitative and quantitative findings diverged for RQ6. The Wilcoxon signed-rank test failed to find differences between pre- and postintervention median scores to be statistically significant. In a closer examination of individual survey responses, small movements in the data, while not statistically significant, align with the qualitative trends of increased preferences for high-quality programs, decreased importance of

word-of-mouth recommendations, and little change to other preferences, including logistics (Table 14).

Table 14

Preferences Most Important to Parent Decision-Making

	Rated most important		
Statement frequently rated most important	Preintervention	Postintervention	Net change
Provider training or credentials.	2	5	+3
The cost.	2	4	+2
The provider is accredited.	3	4	+1
The provider had a reputation for good care.	6	5	−1

In the future, a larger sample would allow for greater statistical power in quantitative analysis and thus a more decisive mixed methods analysis. However, alignment of qualitative data with the dissertation's literature review and needs assessment empirical findings, prolonged and repeated participant observations, triangulation of data sources, peer examination of data, and deep descriptions of context, participants, and research methods suggest that the qualitative findings are trustworthy (Krefting, 1991). Furthermore, the preference for high-quality school readiness opportunities aligns with the most significant gain in school readiness knowledge: quality measures. The covarying school readiness knowledge gains and increased parent preferences for high-quality school readiness programs supported the study's theory of treatment (Appendix F), which posited that an increase in a parent's school readiness knowledge would be the intervention's primary mechanism to change parent preferences (Chaudry et al., 2010; Leviton & Lipsey, 2007). Data also suggested the balance between word of mouth and quality-based decision-making had shifted between pre- and postintervention. While parents would not abandon word of mouth, data suggested that the intervention increased the likelihood parents would consider quality measures in their school readiness decision-making. Lastly, while parent preferences with respect to religion or logistics, for instance, would remain, preference for quality would now compete for priority with these other preferences.

Limitations

Several limitations of this study were identified by the researcher. First, the small sample ($N = 8$) produced insufficient quantitative data to detect a difference between pre- and postintervention scores (Rossi et al., 2004; Salkind, 2014). Furthermore, participant nonresponse in qualitative data collection resulted in incomplete data (O'Leary, 2014). Also, nonprobability sampling inhibited the generalizability of findings, as volunteer participants may not have been representative of the sampling frame (Schutt, 2015). A comparison group could have allowed for findings from the sample to be juxtaposed with those from an untreated group of parents, thereby improving external validity (Schutt, 2015). Limiting the ability to recruit a larger sample was the refusal of the Marine Corps institutional review board (IRB) to approve this study. While base leadership was ready and willing to promote this study and help with recruitment, the IRB representative at Marine Corps headquarters in Quantico, Virginia, indicated that an upcoming study of the CDC presented a conflict of interest. While Johns Hopkins University Homewood IRB contested this decision, the time required to elevate the issue up the Marine Corps chain of command was unavailable to the researcher. Thus, the study proceeded lawfully but without official Marine Corps approval.

While the study's design provided participants many opportunities to learn, lengthening the training time could have increased the dose delivered, leading to more robust results. Furthermore, additional time may have allowed for enhanced use of social learning strategies (e.g., modeling, coaching, and practicing), which have improved parent outcomes in past research (Grindal et al., 2016; Webster-Stratton et al., 2011). Lastly, due to the limited scope of the study, midterm and distal outcomes were not measured. The study did not track participants to see what school readiness decisions they ultimately made and how these choices impacted their children's school readiness. Following parents for a year or more would be required to ascertain the intervention's full impact.

Conclusions and Implications

Research indicates that high-quality school readiness programs improve school readiness, but low-quality programs have little to no effect (Barnett et al., 2016; Duncan & Magnuson, 2013; Heckman et al., 2010). This study's conceptual framework suggested a possible avenue for increasing military child participation in high-quality school readiness programs: increasing parent preferences for these programs. The theory of treatment (Appendix F) posited that intervention participation would change preferences through increased school readiness knowledge and enhanced community support. This study hypothesized that empowering parents to employ school readiness knowledge to identify, select, and actualize high-quality school readiness opportunities, in Yuma and at future duty stations, would then improve military child school readiness. Quantitative analysis did not find that intervention participation resulted in statistically significant changes in community support, school readiness knowledge, or school readiness preferences. However, the qualitative findings suggest that participants across different demographics increased their perceptions of community support, school readiness knowledge, and preferences for high-quality programs and their likelihood of using these new preferences in the selection of high-quality opportunities in the future. In fact, data suggested that preferences for high-quality school readiness programs and the likelihood that these preferences would impact future school readiness decisions increased for all eight participants. No parents reported a preference for quality before the intervention, but all parents said after the intervention that they would prioritize program quality.

The significant gains in school readiness knowledge and increased preferences for quality as a result of intervention participation revealed that parents initially had low awareness of school readiness topics, few preferences for school readiness programs, and inadequate resources and support to overcome this lack of knowledge or experience. With half of Marine Corps children under the age of 5 years, military and civilian leadership must further attune themselves to the needs of this vulnerable population. Furthermore, military decision makers must

acknowledge the readiness, resiliency, recruitment, and retention consequences of underestimating the school readiness support that military families require (Floyd & Phillips, 2013; Lester et al., 2016). The current lack of awareness of the modern military family by military leadership has resulted in a disconnect between military support programs and the needs of military families (National Academies of Sciences, Engineering, and Medicine, 2019).

However, more research is required to understand the entirety of this issue facing military families. First, examining school readiness at other Marine Corps installations may expand understandings of how context affects school readiness opportunities and constraints faced by military families. Furthermore, measuring school readiness for all Marine Corps families, including families of officers, which also experience constraints due to military life, would extend the findings of this study. Investigating military family social networks, especially online, may provide insight into how school readiness community norms are shared and adopted and present new possibilities for future interventions. Furthermore, the current gap in data on young military children hinders the ability of researchers to provide a comprehensive portrait of school readiness for this population (Anderson et al., 2014; Barker & Berry, 2009; Chartrand et al., 2008; Lester et al., 2016; Lleras & McKillip, 2016; Schmitt et al., 2015). Tracking school readiness program enrollment, including program quality, military family use of local school readiness resources, school readiness at kindergarten entry, and other data points, may provide further consciousness of the factors contributing to military child school readiness.

In practice, military leadership, with the input of military families, should reassess Marine and Family Services' programs according to their effectiveness in meeting the school readiness needs of the families of enlisted service members. According to this study's findings, school readiness resources are currently inadequate, but repurposing or realigning current programs and staffing to meet the actual needs of families may help alleviate the challenges they face. Incorporating this intervention into a new program, comparable to the SLP, that could provide school readiness education and training for parents and ongoing support and advocacy is recommended (Aronson et al., 2011). Alternatively, MCAS Yuma's Child and Youth Program

could be reconfigured to expand its resource and referral office to include these services, or the SLP could incorporate services for the families of children aged 5 years and under. Of course, approval by either the MCAS Yuma commander or Marine Corps headquarters would first be required.

Military leadership must also increase its communication, coordination, and engagement with the local community on school readiness issues, as many military families rely on Yuma resources to prepare their children for kindergarten. Local programs should be viewed as partners, rather than competitors, and, when appropriate, MCAS Yuma could share resources for the benefit of the community. Also, MCAS Yuma should seek representation on the Yuma First Things First Board, participate in Yuma Regional Partnership Council meetings, and collaborate with other Arizona military installations to advocate on a state level for military child school readiness.

Increased school readiness support is vital for military families that currently experience many barriers to preparing their young children for kindergarten. However, change requires leadership to acknowledge the importance of school readiness and recognize the challenges military families face, as outlined in this dissertation. Fortunately, Marine Corps leaders have the agency to lessen this burden for military families by providing resources, such as this intervention, that will empower parents to become champions of their children's early education.

References

Anderson, S., Leventhal, T., & Dupéré, V. (2014). Residential mobility and the family context: A developmental approach. *Journal of Applied Developmental Psychology*, *35*(2), 70–78. doi:10.1016/j.appdev.2013.11.004

Ansari, A., & Gershoff, E. (2016). Parent involvement in Head Start and children's development: Indirect effects through parenting. *Journal of Marriage and Family*, *78*(2), 562–579. doi:10.1111/jomf.12266

Arnold, D., Kupersmidt, J., Voegler-Lee, M., & Marshall, N. (2012). The association between preschool children's social functioning and their emergent academic skills. *Early Childhood Research Quarterly*, *27*(3), 376–386. doi:10.1016/j.ecresq.2011.12.009

Aronson, K., Caldwell, L., Perkins, D., & Pasch, K. (2011). Assisting children and families with military related disruptions: The United States Marine Corps school liaison program. *Psychology in the Schools*, *48*, 998–1015. doi:10.1002/pits.20608

Augustine, J., Cavanagh, S., & Crosnoe, R. (2009). Maternal education, early child care and the reproduction of advantage. *Social Forces*, *88*(1), 1–29. doi:10.1353/sof.0.0233

Baker, S., Sanders, M., Turner, K., & Morawska, A. (2017). A randomized controlled trial evaluating a low-intensity interactive online parenting intervention, Triple P Online Brief, with parents of children with early onset conduct problems. *Behaviour Research and Therapy*, *91*, 78–90. doi:10.1016/j.brat.2017.01.016

Baranowski, T., & Stables, G. (2000). Process evaluations of the 5-a day projects. *Health Education and Behavior*, *27*, 157–166. doi:10.1177/109019810002700202

Barker, L., & Berry, K. (2009). Developmental issues impacting military families with young children during single and multiple deployments. *Military Medicine*, *174*, 1033–1040. doi:10.7205/milmed-d-04-1108

Barnett, W., Friedman-Krauss, A., Gomez, R., Horowitz, M., Weisenfeld, G., & Squires, J. (2016). *The state of preschool 2015: State preschool yearbook*. Retrieved from National Institute for Early Education Research website: http://nieer.org

Bassok, D., Latham, S., & Rorem, A. (2016). Is kindergarten the new first grade? *AERA Open*, *2*(1), 1–31. doi:10.1177/233285841561635

Bassok, D., Markowitz, A., Player, D., & Zagardo, M. (2018). Are parents' ratings and satisfaction with preschools related to program features? *AERA Open*, *4*(1), PP–PP. doi:10.1177/2332858418759954

Beardslee, W., Lester, P., Klosinski, L., Saltzman, W., Woodward, K., Nash, W., . . . Leskin, G. (2011). Family-centered preventive intervention for military families: Implications for implementation science. *Prevention Science*, *12*(4), 339–348. doi:10.1007/s11121-011-0234-5

Blasko, K., & Murphy, P. (2016). Military parenting in the digital age: Existing practices, new possibilities. In A. Gewirtz & A. Youssef (Eds.), *Parenting and children's resilience in military families* (pp. 606–662). Cham, Switzerland: Springer International Publishing.

Bowles, S., & Bates, M. (2010). Military organizations and programs contributing to resilience building. *Military Medicine*, *175*(6), 382–385. doi:10.7205/milmed-d-10-00099

Bronfenbrenner, U. (1994). Ecology models of human development. In T. N. Postlewaite & T. Husen (Eds.), *International encyclopedia of education* (2nd ed., Vol. 3, pp. 1643–1647). Oxford, England: Elsevier.

Bronfenbrenner, U., & Morris, P. A. (2006). The biological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology*: *Theoretical models of human development* (6th ed., Vol. 1, pp. 793–828). doi:10.1002/9780470147658.chpsy0114

Brown, C., & Lan, Y. (2015). A qualitative metasynthesis comparing U.S. teachers' conceptions of school readiness prior to and after the implementation of NCLB. *Teaching and Teacher Education*, *45*, 1–13. doi:10.1016/j.tate.2014.08.012

Burchinal, M., Howes, C., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Predicting child outcomes at the end of kindergarten from the quality of pre-kindergarten teacher–child interactions and instruction. *Applied Developmental Science*, *12*(3), 140–153. doi:10.1080/10888690802199418

Burchinal, M., McCartney, K., Steinberg, L., Crosnoe, R., Friedman, S. L., McLoyd, V., & Pianta, R. (2011). Examining the Black–White achievement gap among low-income children using the NICHD Study of Early Child Care and Youth Development. *Child Development*, *82*, 1404–1420. doi:10.1111/j.1467-8624.2011.01620.x

Cannon, J., Zellman, G., Karoly, L., & Schwartz, H. (2017). *Quality rating and improvement systems for early care and education programs: Making the second generation better*. Retrieved from RAND Corporation website: http://www.rand.org/pubs/perspectives/PE235.html

Card, N., Bosch, L., Casper, D., Wiggs, C., Hawkins, S., Schlomer, G., & Borden, L. (2011). A meta-analytic review of internalizing, externalizing, and academic adjustment among children of deployed military service members. *Journal of Family Psychology*, *25*(4), 508-520. doi:10.1037/a0024395

Center on the Developing Child at Harvard University. (2016). *Building core capabilities for life: The science behind the skills adults need to succeed in parenting and in the workplace*. Retrieved from http://www.developingchild.harvard.edu/resources/building-core-capacities-for-life/

Chandra, A., Martin, L., Hawkins, S., & Richardson, A. (2010). The impact of parental deployment on child social and emotional functioning: Perspectives of school staff. *Journal of Adolescent Health*, *46*(3), 218–223. doi:10.1016/j.jadohealth.2009.10.009

Chartrand, M., Frank, D., White, L., & Shope, T. (2008). Effect of parents' wartime deployment on the behavior of young children in military families. *Archives of Pediatrics & Adolescent Medicine*, *162*, 1009–1014. doi:10.1001/archpedi.162.11.1009

Chaudry, A., Henly, J., & Meyers, M. (2010). *Conceptual frameworks for child care decision-making*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation.

Conforte, A., Bakalar, J., Shank, L., Quinlan, J., Stephens, M., Sbrocco, T., & Tanofsky-Kraff, M. (2017). Assessing military community support: Relations among perceived military community support, child psychosocial adjustment, and parent psychosocial adjustment. *Military Medicine*, *182*, e1871–e1878. doi:10.7205/milmed-d-17-00016

Cox, M., & Paley, B. (1997). Families as systems. *Annual Review of Psychology*, *48*(1), 243–267. doi:10.1146/annurev.psych.48.1.243

Cozza, S., & Lerner, R. (2013). Military children and families: Introducing the issue. *Society for Research in Child Development: Social Policy Report*, *23*(2), 3–11. doi:10.1353/foc.2013.0016

Creswell, J., & Clark, V. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.

Crosnoe, R., Purtell, K., Davis-Kean, P., Ansari, A., & Benner, A. (2016). The selection of children from low-income families into preschool. *Developmental Psychology*, *52*(4), 599–612. doi:10.1037/dev0000101

Day, J., & Sanders, M. (2017). Mediators of parenting change within a web-based parenting program: Evidence from a randomized controlled trial of Triple P Online. *Couple and Family Psychology: Research and Practice*, *6*(3), 154–170. doi:10.1037/cfp0000083

Dechausay, N. & Anzelone, C. (2016). *Cutting through complexity: Using behavioral science to improve Indiana's child care subsidy program* (OPRE Report 2016-03). Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation.

Department of Defense. (2015). *Annual report to the congressional defense committees on the Department of Defense military families readiness council*. Retrieved from http://download.militaryonesource.mil/12038/MOS/Reports/FY2015-Annual-Report-MFRC.pdf

DeVoe, E., Paris, R., & Acker, M. (2016). Prevention and treatment for parents of young children in military families. In A. Gewirtz & A. Youssef (Eds.), *Parenting and children's resilience in military families* (pp. 663–714). Cham, Switzerland: Springer.

DiNallo, J., Kuhl, M., Borden, L., & Perkins, D. (2016). Interventions to support and strengthen parenting in military families: State of the evidence. In A. Gewirtz & A. Youssef (Eds.), *Parenting and children's resilience in military families* (pp. 606–662). Cham, Switzerland: Springer.

Doty, J., Rudi, J., Pinna, K., Hanson, S., & Gewirtz, A. (2016). If you build it, will they come? Patterns of Internet-based and face-to-face participation in a parenting program for military families. *Journal of Medical Internet Research*, *18*(6), e169. doi:10.2196/jmir.4445

Duncan, G., & Magnuson, K. (2013). Investing in preschool programs. *Journal of Economic Perspectives*, *27*(2), 109–132. doi:10.1257/jep.27.2.109

Duppong-Hurley, K., Hoffman, S., Barnes, B., & Oats, R. (2016). Perspectives on engagement barriers and alternative delivery formats from non-completers of a community-run parenting program. *Journal of Child and Family Studies*, *25*(2), 545–552. doi:10.1007/s10826-015-0253-0

Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research*, *18*, 237–256. doi:10.1093/her/18.2.237

Eaton, K., Hoge, C., Messer, S., Whitt, A., Cabrera, O., McGurk, D., . . . Castro, C. (2008). Prevalence of mental health problems, treatment need, and barriers to care among primary care-seeking spouses of military service members involved in Iraq and Afghanistan deployments. *Military Medicine*, *173*, 1051–1056. doi:10.7205/milmed.173.11.1051

Emlen, A. (2007). *The Emlen Scales: A packet of scales for measuring the quality of child care from a parent's point of view*. Retrieved from https://works.bepress.com/arthur_emlen/7/

Engel, R., Gallagher, L., & Lyle, D. (2010). Military deployments and children's academic achievement: Evidence from Department of Defense Education Activity Schools. *Economics of Education Review*, *29*(1), 73–82. doi:10.1016/j.econedurev.2008.12.003

First Things First. (2012). *High-quality child care and early education: What Arizona's parents want.* Retrieved from http://www.azftf.gov/WhoWeAre/Board/Documents/FTF-ChildCareReport.pdf

First Things First. (2015). *Arizona school readiness indicators.* Retrieved from https://www.firstthingsfirst.org/Publications/Arizona%20School%20Readiness%20Indicators.pdf

First Things First, Yuma Regional Partnership Council. (2016). *Needs and assets report: Yuma*. Retrieved from https://www.firstthingsfirst.org/regions/Publications/Regional%20Needs%20and%20Assets%20Report-2016-Yuma.pdf

First Things First. (2017). *How we work*. Retrieved from http:// www.firstthingsfirst.org/what-we-do/how-we-work/

First Things First. (2018). *Quality first.* Retrieved from http://www.qualityfirstaz.com/index.html

First Things First. (2019). *Quality checklist*. Retrieved from https://qualityfirstaz.com/quality-child-care-checklist/

Flake, E., Davis, B., Johnson, P., & Middleton, L. (2009). The psychosocial effects of deployment on military children. *Journal of Developmental & Behavioral Pediatrics*, *30*(4), 271-278. doi:10.1097/dbp.0b013e3181aac6e4

Floyd, L., & Phillips, D. (2013). Child care and other support programs. *The Future of Children*, *23*(2), 79–97. doi:10.1353/foc.2013.0013

Forry, N., Isner, T., Daneri, M., & Tout, K. (2014). Child care decision making: Understanding priorities and processes used by low-income families in Minnesota. *Early Education and Development*, *25*, 995–1015. doi:10.1080/10409289.2014.8937

Gewirtz, A., DeGarmo, D., & Zamir, O. (2018). After deployment, adaptive parenting tools: 1-year outcomes of an evidence-based parenting program for military families following deployment. *Prevention Science*, *19*(4), 589–599. doi:10.1007/s11121-017-0839-4

Gerwirtz, A., & Youssef, A. (2016). Parenting and children's resilience in military families: A twenty-first century perspective. In A. Gewirtz & A. Youssef (Eds.), *Parenting and children's resilience in military families* (pp. 606–662). Cham, Switzerland: Springer.

Glenn-Applegate, K., Justice, L. M., & Kaderavek, J. (2016). How do caregivers select preschools? A study of children with and without disabilities. *Child Youth Care Forum*, *45*(1), 123–153. doi:10.1007/s10566-015-9322-1

Gorman, G., Eide, M., & Hisle-Gorman, E. (2010). Wartime military deployment and increased pediatric mental and behavioral health complaints. *Pediatrics*, *126*, 1058–1066. doi:10.1542/peds.2009-2856

Green, S., Nurius, P. S., & Lester, P. (2013). Spouse psychological well-being: A keystone to military family health. *Journal of Human Behavior in the Social Environment*, *23*, 753–768. doi:10.1080/10911359.2013.795068

Greenberg, E., Adams, G., & Michie, M. (2016). *Barriers to preschool participation for low-income children of immigrants in Silicon Valley*. Washington, DC: Urban Institute.

Grindal, T., Bowne, J., Yoshikawa, H., Schindler, H., Duncan, G., Magnuson, K., & Shonkoff, J. (2016). The added impact of parenting education in early childhood education programs: A meta-analysis. *Children and Youth Services Review*, *70*, 238–249. doi:10.1016/j.childyouth.2016.09.018

Grogan, K. (2012). Parents' choice of pre-kindergarten: The interaction of parent, child and contextual factors. *Early Child Development and Care*, *182*, 1265–1287. doi:10.1080/03004430.2011.608127

Hall, C., & Bierman, K. (2016). Technology-assisted interventions for parents of young children: Emerging practices, current research, and future directions. *Early Childhood Research Quarterly*, *33*, 21–32. doi:10.1016/j.ecresq.2015.05.003

Harmeyer, E., Ispa, J., Palermo, F., & Carlo, G. (2016). Predicting self-regulation and vocabulary and academic skills at kindergarten entry: The roles of maternal parenting stress and mother-child closeness. *Early Childhood Research Quarterly*, *37*, 153–164. doi:10.1016/j.ecresq.2016.05.001

Hatfield, B., Lower, J., Cassidy, D., & Faldowski, R. (2016). Inequities in access to quality early care and education: Associations with funding and community context. *Early Childhood Research Quarterly*, *30*, 316–326. doi:10.1016/j.ecresq.2014.01.001

Headquarters Marine Corps, Marine and Family Services. (2016). *Marine Corps demographic update*. Retrieved from http://www.usmc-mccs.org/mccs/assets/File/Demographics%20Booklet%20June%202016.pdf

Heath, S., Wigley, C., Hogben, J., Fletcher, J., Collins, P., Boyle, G., & Eustice, S. (2017). Patterns in participation: Factors influencing parent attendance at two, centre-based early childhood interventions. *Journal of Child and Family Studies*, *27*, 253-267. doi:10.1007/s10826-017-0878-2

Heckman, J. J. (2008). Schools, skills, and synapses. *Economic Inquiry*, *46*(3), 289–324. doi:10.1111/j.1465-7295.2008.00163.x

Heckman, J., Moon, S., Pinto, R., Savelyev, P., & Yavitz, A. (2010). The rate of return to the HighScope Perry Preschool Program. *Journal of Public Economics*, *94*(1–2), 114–128. doi:10.1016/j.jpubeco.2009.11.00

Herrero, J., & Gracia, E. (2007). Measuring perceived community support: Factorial structure, longitudinal invariance, and predictive validity of the PCSQ (Perceived Community Support Questionnaire). *Journal of Community Psychology*, *35*(2), 197–217. doi:10.1002/jcop.20143

Hill, C. J., Bloom, H. S., Black, A. R., & Lipsey, M. W. (2008). Empirical benchmarks for interpreting effect sizes in research. *Child Development Perspectives*, *2*, 172–177. doi:10.1111/j.1750-8606.2008.00061.x

Hisle-Gorman, E., Harrington, D., Nylund, C., Tercyak, K., Anthony, B., & Gorman, G. (2015). Impact of parents' wartime military deployment and injury on young children's safety and mental health. *Journal of the American Academy of Child & Adolescent Psychiatry*, *54*(4), 294–301. doi:10.1016/j.jaac.2014.12.017

Holliday, M., Cimetta, A., Cutshaw, C., Yaden, D., & Marx, R. (2014). Protective factors for school readiness among children in poverty. *Journal of Education for Students Placed at Risk*, *19*(3–4), 125–147. doi:10.1080/10824669.2014.971692

Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2016). Ready to learn? Children's pre-academic achievement in pre-kindergarten programs. *Early Childhood Research Quarterly*, *23*(1), 27–50. doi:10.1016/j.ecresq.2007.05.002

Hur, E., Buettner, C., & Jeon, L. (2015). Parental depressive symptoms and children's school-readiness: The indirect effect of household chaos. *Journal of Child and Family Studies*, *24*, 3462–3473. doi:10.1007/s10826-015-0147-1

Karoly, L., Kilburn, M., & Cannon, J. (2005). *Early childhood interventions: Proven results, future promise*. Retrieved from RAND Corporation website: https://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG341.pdf

Kelley, M. L., Finkel, L. B., & Ashby, J. (2003). Geographic mobility, family, and maternal variables as related to the psychosocial adjustment of military children. *Military Medicine*, *168*, 1019–1024. Retrieved from http://militarymedicine.amsus.org/

Kim, J., & Fram, M. (2016). Profiles of choice: Parents' patterns of priority in child care decision-making. *Early Childhood Research Quarterly*, *24*(1), 77–91. doi:10.1016/j.ecresq.2008.10.001

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy*, *45*, 214–222. doi:10.5014/ajot.45.3.214

Laerd Statistics. (2020). Wilcoxon signed-rank test. Retrieved from https://statistics.laerd.com/premium/spss/wsrt/wilcoxon-signed-rank-test-in-spss.php

Lahti, M., Elicker, J., Zellman, G., & Fiene, R. (2016). Approaches to validating child care quality rating and improvement systems (QRIS): Results from two states with similar QRIS type designs. *Early Childhood Research Quarterly*, *30*, 280–290. doi:10.1016/j.ecresq.2014.04.005

Lester, P., Aralis, H., Sinclair, M., Kiff, C., Lee, K.-H., Mustillo, S., & Wadsworth, S. M. (2016). The impact of deployment on parental, family and child adjustment in military families. *Child Psychiatry and Human Development*, *47*, 938–949. doi:10.1007/s10578-016-0624-9

Lester, P., Peterson, K., Reeves, J., Knauss, L., Glover, D., Mogil, C., . . . Beardslee, W. (2010). The long war and parental combat deployment: Effects on military children and at-home spouses. *Journal of the American Academy of Child and Adolescent Psychiatry*, *49*(4), 310–320. doi:10.1016/j.jaac.2010.01.003

Lester, P., Saltzman, W. R., Woodward, K., Glover, D., Leskin, G. A., Bursch, B., . . . Beardslee, W. (2012). Evaluation of a family-centered prevention intervention for military children and families facing wartime deployments. *American Journal of Public Health*, *102*(S1), S48–S54. doi:10.2105/ajph.2010.300088

Leviton, L. C., & Lipsey, M. W. (2007). A big chapter about small theories: Theory as method: Small theories of treatments. *New Directions for Evaluation*, *2007*(114), 27–62. doi:10.1002/ev.224

Li, W., Farkas, G., Duncan, G., Burchinal, M., & Vandell, D. (2013). Timing of high-quality child care and cognitive, language, and preacademic development. *Developmental Psychology*, *49*, 1440-1451. doi:10.1037/a0030613

Linnan, L., & Steckler, A. (2002). *Process evaluations for public health interventions and research*. San Francisco, CA, Wiley.

Lipscomb, S. (2013). Increasing access to quality child care for children from low-income families: Families' experiences. *Children and Youth Services Review*, *35*(3), 411–419. doi:10.1016/j.childyouth.2012.12.020

Lipsey, M. (1998). Design sensitivity: Statistical power for applied experimental research. In L. Bickman & D. J. Rog (Eds.), *Handbook of applied social research method*s (pp. 39–68). Thousand Oaks, CA: Sage.

Lipsey, M. W., Puzio, K., Yun, C., Hebert, M. A., Steinka-Fry, K., Cole, M. W., . . . Busick, M. D. (2012). *Translating the statistical representation of the effects of education interventions into more readily interpretable forms* (NCSER 2013-3000). Retrieved from National Center for Special Education Research website: http://ies.ed.gov/ncser/pubs/20133000/

Lleras, C., & McKillip, M. (2016). When children move: Behavior and achievement outcomes during elementary school. *The Journal of Educational Research*, *0*, 1–11. doi:10.1080/00220671.2015.1060930

Lundquist, J., & Xu, Z. (2014). Reinstitutionalizing families: Life course policy and marriage in the military. *Journal of Marriage and Family*, *76*, 1063–1081. doi:10.1111/jomf.12131

Lyle, D. (2006). Using military deployments and job assignments to estimate the effect of parental absences and household relocations on children's academic achievement. *Journal of Labor Economics*, *24*(2), 319–350. doi:10.1086/499975

Mansfield, A. J., Kaufman, J. S., Marshall, S. W., Gaynes, B. N., Morrissey, J. P., & Engel, C. C. (2010). Deployment and the use of mental health services among U.S. Army wives. *The New England Journal of Medicine*, *362*(2), 101–109. doi:10.1056/nejmoa0900177

McGilloway, S., Mhaille, G. N., Bywater, T., Furlong, M., Leckey, Y., Kelly, P., . . . Donnelly, M. (2012). A parenting intervention for childhood behavioral problems: A randomized controlled trial in disadvantaged community-based settings. *Journal of Consulting and Clinical Psychology*, *80*(1), 116-127. doi:10.1037/a0026304

McWayne, C., Cheung, K., Wright, L., & Hahs-Vaughn, D. (2012). Patterns of school readiness among Head Start children: Meaningful within-group variability during the transition to kindergarten. *Journal of Educational Psychology*, *104*, 862. doi:10.1037/a0028884

Mistry, R., Benner, A., Biesanz, J., Clark, S., & Howes, C. (2016). Family and social risk, and parental investments during the early childhood years as predictors of low-income children's school readiness outcomes. *Early Childhood Research Quarterly*, *25*(4), 432–449. doi:10.1016/j.ecresq.2010.01.002

National Academies of Sciences, Engineering, and Medicine. (2019). *Strengthening the military family readiness system for a changing American society*. doi:10.17226/25380

National Association for the Education of Young Children. (2019). *What does a high-quality preschool program look like?* Retrieved from https://www.naeyc.org/our-work/families/what-does-high-quality-program-for-preschool-look-like

Neal, J., & Neal, Z. (2013). Nested or networked? Future directions for ecological systems theory. *Social Development*, *22*, 722–737. doi:10.1111/sode.12018

Nelson, M., & Schutz, R. (2007). Day care differences and the reproduction of social class. *Journal of Contemporary Ethnography*, *36*(3), 281–317. doi:10.1177/0891241606293137

Nievar, M. A., Van Egeren, L., & Pollard, S. (2010). A meta-analysis of home visiting programs: Moderators of improvements in maternal behavior. *Infant Mental Health Journal*, *31*(5), 499–520. doi:10.1002/imhj.20269

North Carolina Division of Child Development and Early Education. (2016). *North Carolina pre-kindergarten (NC pre-k) program requirements and guidance*. Retrieved from http://ncchildcare.nc.gov/pdf_forms/NCPre-K_Program_Requirements_Guidance.pdf

Okado, Y., Bierman, K., & Welsh, J. (2014). Promoting school readiness in the context of socio-economic adversity: Associations with parental demoralization and support for learning. *Child Youth Care Forum*, *43*(3), 353–371. doi:10.1007/s10566-013-9242-x

O'Leary, Z. (2014). *The essential guide to doing research* (2nd ed.). London, England: Sage.

Onwuegbuzie, A., & Leech, N. (2006). Linking research questions to mixed methods data analysis procedures. *The Qualitative Report*, *11*, 474–498. Retrieved from https://nsuworks.nova.edu/trq/vol11/iss3/3

Paley, B., Lester, P., & Mogil, C. (2013). Family systems and ecological perspectives on the impact of deployment on military families. *Clinical Child and Family Psychology Review*, *16*(3), 245-265. doi:10.1007/s10567-013-0138-y

The Pennsylvania State University. (2017). Clearinghouse for military family readiness. Retrieved from https://militaryfamilies.psu.edu/

Raikes, H., Wilcox, B., Peterson, C., Hegland, S., Atwater, J., Summers, J., . . . Edwards, C. (2005). *Parent perceptions of child care choice and quality in four states*. Retrieved from University of Nebraska, Center on Children, Families and the Law website: http://digitalcommons.unl.edu/ccflpubs/14

Reardon, S., & Portilla, X. (2016). Recent trends in income, racial, and ethnic school readiness gaps at kindergarten entry. *AERA Open*, *2*(3), 1–18. doi:10.1177/2332858416657343

Rossi, P., Lipsey, M., & Freeman, H. (2004). An overview of program evaluation. In P. Rossi, M. Lipsey, & H. Freeman (Eds.), *Evaluation: A systematic approach*, 1-30. Thousand Oaks, CA: Sage.

Sabol, T., Hong, S., Pianta, R., & Burchinal, M. (2013). Can rating pre-K programs predict children's learning? *Science*, *341*, 845–846. doi:10.1126/science.1233517

Sabol, T., & Pianta, R. (2012). Patterns of school readiness forecast achievement and socioemotional development at the end of elementary school. *Child Development*, *83*(1), 282–299. doi:10.1111/j.1467-8624.2011.01678.x

Sabol, T., & Pianta, R. (2015). Validating Virginia's quality rating and improvement system among state-funded pre-kindergarten programs. *Early Childhood Research Quarterly*, *30 (Part B)*, 183–198. doi:10.1016/j.ecresq.2014.03.004

Saldana, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). London, England: Sage.

Salkind, N. (2014). *Statistics for people who (think they) hate statistics* (5th ed.). Los Angeles, CA: Sage.

Saltzman, W., Lester, P., Milburn, N., Woodward, K., & Stein, J. (2016). Pathways of risk and resilience: Impact of a family resilience program on active-duty military parents. *Family Process*, *55*, 633–646. doi:10.1111/famp.12238

Sanders, M. (2012). Development, evaluation, and multinational dissemination of the Triple P-Positive Parenting Program. *Annual Review of Clinical Psychology*, *8*(1), 345–379. doi:10.1146/annurev-clinpsy-032511-143104

Sanders, M., & Kirby, J. (2014). A public health approach to improving parenting and promoting children's well-being. *Child Development Perspectives*, *8*(4), 250–257. doi:10.1111/cdep.12086

Sanders, M., Kirby, J., Tellegen, C., & Day, J. (2014). The triple p-positive parenting program: A systematic review and analysis of a multi-level system of parenting support. *Clinical Psychology Review*, *34*, 337-357. doi:10.1016/j.cpr.2014.04.003

Schindler, H. S., Fisher, P. A., & Shonkoff, J. P. (2017). From innovation to impact at scale: Lessons learned from a cluster of research–community partnerships. *Child Development*, *88*, 1435–1446. doi:10.1111/cdev.12904

Schmitt, S., Finders, J., & McClelland, M. (2015). Residential mobility, inhibitory control, and academic achievement in preschool. *Early Education and Development*, *26*(2), 189–208. doi:10.1080/10409289.2015.975033

Schutt, R. (2015). *Investigating the social world: The process and practice of research* (8th ed.). Thousand Oaks, CA: Sage.

Shadish, W., Cook, T., & Campbell, D. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

Shonkoff, J., & Fisher, P. (2013). Rethinking evidence-based practice and two-generation programs to create the future of early childhood policy. *Development and Psychopathology*, *25*, 1635–1653. doi:10.1017/s0954579413000813

Soriano, F .I. (2013). *Conducting needs assessments: A multidisciplinary approach* (2nd ed.). Los Angeles, CA: Sage.

Stuart, E. A. (2007). Estimating causal effects using school-level data sets. *Educational Researcher*, *36*, 187–198. doi:10.3102/0013189X07303396

Torquati, J., Raikes, H., Huddleston-Casas, C., Bovaird, J., & Harris, B. (2016). Family income, parent education, and perceived constraints as predictors of observed program quality and parent rated program quality. *Early Childhood Research Quarterly*, *26*(4), 453–464. doi:10.1016/j.ecresq.2011.03.004

University of Minnesota. (2017). After deployment: adaptive parenting tools. Retrieved from http://www.cehd.umn.edu/fsos/research/adapt/default.asp

U.S. Census Bureau. (2015). *Quick fact: United States*. Retrieved from https://www.census.gov/quickfacts/table/PST045215/00

U.S. Department of Defense Education Activity. (2018). *Interstate compact on educational opportunity for military children*. Retrieved from http://www.dodea.edu/Partnership/interstateCompact.cfm

U.S. Department of Education. (2015). *A matter of equity: Preschool in the US*. Retrieved from https://www2.ed.gov/documents/early-learning/matter-equity-preschool-america.pdf

Waliski, A., Bokony, P., & Kirchner, J. E. (2012). Combat-related parental deployment: Identifying the impact on families with preschool-age children. *Journal of Human Behavior in the Social Environment*, *22*, 653–670. doi:10.1080/10911359.2012.655621

Walsh, F. (2012). Family resilience: Strengths forged through adversity. In F. Walsh (Ed.), *Normal family processes* (4th ed., pp. 399–427). New York, NY: Guilford Press.

Walter, M., & Lippard, C. (2016). Head Start teachers across a decade: Beliefs, characteristics, and time spent on academics. *Early Childhood Education Journal*, *45*, 693-702. doi:10.1007/s10643-01

Weber, E., & Weber, D. (2005). Geographic relocation frequency, resilience, and military adolescent behavior. *Military Medicine*, *170*, 638–642. doi:10.7205/milmed.170.7.638

Weber, R. (2011). *Understanding parents' child care decision-making: A foundation for policy making*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation.

Weber, R., Grobe, D., & Scott, E. (2018). Predictors of low-income parent child care selections. *Children and Youth Services Review*, *88*, 528-540. doi:10.1016/j.childyouth.2018.04.001

Webster-Stratton, C., Rinaldi, J., & Reid, J. (2011). Long-term outcomes of Incredible Years parenting program: Predictors of adolescent adjustment. *Child and Adolescent Mental Health*, *16*(1), 38–46. doi:10.1111/j.1475-3588.2010.00576.x

The White House. (2011). *Strengthening our military families*. Retrieved from https://www.dol.gov/dol/milfamilies/strengthening_our_military_families.pdf

Whitestone, Y., & Thompson, B. (2016). How do military family policies influence parenting resources available to families? In A. Gewirtz & A. Youssef (Eds.), *Parenting and children's resilience in military families* (pp. 606–662). Cham, Switzerland: Springer.

York, B., & Loeb, S. (2014). *One step at a time: The effects of an early literacy text message program for parents of preschoolers* (NBER Working Paper No. 20659). Cambridge, MA: National Bureau of Economic Research.

Yuma Chamber of Commerce. (2020). *Yuma County demographics.* Retrieved from http://www.yumachamber.org/demographics.html

Zero to Three. (2017). Military family project. Retrieved from https://www.zerotothree.org/our-work/military-family-project

Zhang, N., Rudi, J., Zamir, O., & Gewirtz, A. (2017). Parent engagement in online mindfulness exercises within a parent training program for post-deployed military families. *Mindfulness*, *9(1)*, 1–12. doi:10.1007/s12671-017-0810-2

Ziol-Guest, K., & McKenna, C. (2014). Early childhood housing instability and school readiness. *Child Development*, *85*(1), 103–113. doi:10.1111/cdev.12105

Appendix A

Needs Assessment Design

Variable	Research questions	Codes	Corresponding interview questions
Perceptions of school readiness[a]	How do stakeholders perceive school readiness for military children? Do they believe school readiness is important?	Family values, military leadership, societal perspective	Military program: 1, 4 Local programs: 1, 2 Marine Corps headquarters: 3, 4 Military family: 1
School readiness resources[b]	What public, private, and military sponsored school readiness resources are available for military children? Are they affordable, high-quality, accessible, and have capacity? Which resources do military families utilize or not utilize and why?	Military support programs, affordability, accessibility, capacity, child development center, data, kindergarten, local community, military identifier, homeschooling, private preschool, public preschool, quality, selection of preschool, transitions	Military programs: 1, 2, 4 Local programs: 1, 2, 4 Marine Corps headquarters: 1, 3, 4 Military family: 2, 3, 4, 6
Military life[c]	How does the military lifestyle impact school readiness for military children?	Deployment, operational tempo, relocation	Military program: 3, 4 Local programs: 3 Marine Corps headquarters: 1 Military family: 5, 6
Military family[d]	How do family characteristics impact the school readiness of military children?	Maternal health, mental health, family system, primary caregiving parent (military spouse), race/ethnicity, rank, readiness, school readiness, social support, young parents, parenting, at-risk factors	Military program interview: 3, 4, 5 Local programs: 1, 3, 4 Marine Corps headquarters: 1, 2 Military family: 5

[a]How various stakeholders value the development of school readiness skills.
[b]Those military and local resources designed to promote school readiness skills, such as including parenting support or early childhood education programs.
[c]The lifestyle of active-duty military families, which include deployments and relocations.
[d]The parents and children living in the same household where at least one parent is an active-duty service member.

Appendix B

Needs Assessment Interview Protocol

Interview Questions for Military Programs

1. How does your program assist military families with young children, aged 0-5, and what are your successes working with this group?

   Follow-Up/Probing Questions:

   - What is the goal of your program?
   - What are the different classes/programs you offer?
   - Are their requirements for participation?
   - How does your program specifically promote or perceive school readiness? (Addresses healthy parenting, parent mental health, child development, or early childhood education, school readiness domains, etc.)
   - Do you have any data (participation data, surveys, course descriptions or materials, brochures, etc.) about your programs you are able to share?

2. What are the challenges your program faces when serving military families?

   Follow-Up/Probing Questions:

   - Are there barriers to access?
   - Are there reasons why military families do or do not participate?

3. What significant challenges do military families with children aged 0-5 to be face?

   Follow-Up/Probing Questions:

   - How do the following impact these families:
     - Relocation or other changes in routine and home environment
     - Deployments and other separations from their service member
     - Parenting or home environment
     - Parent health and well-being
     - Transitions to Kindergarten
   - To what degree are families able to successfully manage these challenges?

4. How have you observed these challenges influencing a military child's preparation for kindergarten?

   Possible Follow-Up/Probing Questions:

   - How are military families preparing their young children for kindergarten?
   - Are there resources military families would benefit from, but do not have access to?
   - How do military families perceive school readiness? Is this important to them?
   - Is it common for the families you work with to send their young children to preschool?
   - Are there any barriers in accessing high-quality preschools such as affordability or knowledge of educational opportunities?

5. Providing a stable home environment, sensitive and responsive parenting, ensuring participation in early childhood educational opportunities, and actively engaging in the child's early education help prepare a child for kindergarten. In your experience, do military

families of the following demographics experience challenges in preparing their children for school more than others?

- Income/Rank
- Parental education level
- Race/ethnicity
- Age
- Parent health and psychological well-being (stress, depression, anxiety)

Interview Questions for Local Programs

(Head Start, School Districts, First Things First, Private Preschool)

1. How does your program assist military families with young children, aged 0-5?

   Follow-Up/Probing Questions:

   - What is the goal of your program?
   - What are the different classes/programs you offer?
   - Are their requirements for participation?
   - How does your program specifically promote or perceive school readiness? (Addresses healthy parenting, parent mental health, child development, or early childhood education, school readiness domains, etc.)
   - Do you have any data (participation data, surveys, course descriptions or materials, brochures, etc.) about your programs you are able to share?

2. What has been your programs' experience working with military children and families?

   Follow-Up/Probing Questions:

   - What successes and challenges have you had working with military families?
   - Are there reasons why military families do or do not participate?
   - Are there any barriers in accessing your program such as affordability or knowledge of the program?
   - What are the demographics of the military families you serve?
   - How do military families perceive school readiness? Is this important to them?

3. What significant challenges do you observe military families with children aged 0-5 to be facing?

   Follow-Up/Probing Questions:

   - To what extent do the following impact these families:
     - Relocation or other changes in routine and home environment
     - Deployments and other separations from their service member
     - Parenting or home environment
     - Parent health and well-being
     - Transitions to Kindergarten
   - To what degree are families able to successfully manage these challenges?

4. In your observation, what opportunities do military children have to prepare for kindergarten in Yuma County?

   Follow-Up/Probing Questions:

   - Is it common for military families to attend your program?

- How do military children compare to local children in their opportunities to prepare for kindergarten?
- How do military children compare to local children in their readiness for school?
- Are there resources military families would benefit from, but do not have access to?
- How does your program approach the transition to kindergarten?

Interview Questions for Marine Corps Headquarters & Military Families for Higher Standards (MFHS)

1. Tell me more about programs that serve Marine Corps families and children and your role in administering these programs.

   Follow-Up/Probing Questions:

   - Do you have any data (demographics, participation, surveys, etc.) about your programs you are able to share or resources you would recommend?

2. What is the philosophy of the Marine Corps/MFHS when serving Marine families?

   Follow-Up/Probing Questions:

   - How are providing services for families important to the mission of the Marine Corps/MFHS? Does it relate to the recruitment, retention, and readiness of service members?
   - What successes has the Marine Corps/MFHS experienced in their service to their families and children?
   - What are the biggest challenges the Marine Corps/MFHS faces when serving military families and children?

3. What is the Marine Corps/MFHS position on the education of military children?

   Follow-Up/Probing Questions:

   - What are the Marine Corps/MFHS programmatic and funding priorities for school aged children? And for children under 5?
   - How does the military/MFHS perceive school readiness?

4. What policies, projects, or research about military children is the Marine Corps/MFHS currently pursuing?

   Follow-Up/Probing Questions:

   - Are there any initiatives directly aimed at the 0-5 age group?

Interview Questions for Military Parents

1. When thinking about how to prepare your child for kindergarten, what is most important to you?

2. Which on-base support services have you used while your children have been aged 0-5? (*Name the following to jumpstart memory: New Parent Support, Exceptional Family Member Program, Family Readiness Program, Child Development Center, Military Family Life Counselors, FOCUS, Behavioral Health, Base Library*)

   - Which have been most helpful (or least helpful)? Why?

3. Which local programs have you used while your children have been aged 0-5? (*Name the*

following to jumpstart memory: Head Start, First Things First, Crane or Yuma One School District, YMCA, Charter School Pre-K, Private Preschool)

a. Which have been most helpful (or least helpful)? Why?

4. What resources did you used to gather information about preschool or childcare options at this duty station?

   Follow-Up/Probing Questions:

   - How did you decide which preschool to attend?
   - Is this program affordable for your family?
   - Was there availability in the program you hoped to send your child to?
   - Do you face other challenges finding or enrolling in a program in Yuma?
   - Are you satisfied with the quality of the program and why?

5. To what extent have deployments and relocations impacted your young children?

   Follow-Up/Probing Questions:

   - How have deployments and relocation impacted their readiness for kindergarten?
   - How have deployments and relocation impacted your ability and capacity to parent?
   - How have deployments and relocation impacted your home environment, family, or the health and well-being of you and your spouse in a way that influences your young children?

6. How do you think being stationed in Yuma has impacted your child's preparation for kindergarten?

   Follow-Up/Probing Questions:

   - What has pleased you about your experience in Yuma while preparing your children?
   - What has been a challenge here in Yuma?
   - How would you compare your experience here verses other duty stations?
   - Are there resources you would benefit from, but do not have access to or that do not exist?

Appendix C

Needs Assessment Demographic Survey

Thank you for accepting the invitation to participate in this study on school readiness for military children. The purpose of this study is to better understand the experience of military families stationed aboard Marine Corps Air Station Yuma, Arizona when preparing their young children for kindergarten. A consent form is required for participation in this study. After reading, please indicate below if you agree to participate.

I have read and understood the information in the attached consent form. I agree to participate in the study. I have not waived any legal rights I would otherwise have as a participant in a research study by agreeing to this consent form.

- ☐ I agree to participate.
- ☐ I would rather not participate at this time.

Within your military family, what is your parental role?

- ☐ Mother
- ☐ Father
- ☐ Other _____

Are you a military spouse or a service member?

- ☐ Military Spouse
- ☐ Service Member
- ☐ Other _____

Who would you consider the primary caregiving parent, or the parent that has most responsibility in caring for the children, in your family currently?

- ☐ Military Spouse
- ☐ Service Member
- ☐ Other _____

Is the primary caregiving parent employed?

- ☐ No
- ☐ Yes

How much does the primary caregiving parent work per week?

- ☐ Less than 15 hours
- ☐ 20-30 hours
- ☐ 40 or more

Please fill in the current age for each of your children.

	Age
Child A	
Child B	
Child C	
Child D	

How old were you when your first child was born?

Since your first child was born, how many times have you moved to a new duty station?

Since your first child was born, how many deployments (6 months or longer) have you experienced?

Since your first child was born, how many significant separations (2 weeks-5 months) have you experienced?

What is the highest level of education reached in your family?

	High School Diploma	Some College	College Graduate
Military Spouse			
Service Member			

What is your race or ethnicity?

What is the rank of the service member in your family?

- E1-E3
- E4-E5
- E6-E9
- W1-W5
- O1-O3
- O4-O6
- O7-O10

Appendix D

Need Assessment Participant Informed Consent

Title: School Readiness and Military Children

Principal Investigator: Dr. Christine Eith

Date: April 2017

PURPOSE OF RESEARCH STUDY:
The purpose of this needs assessment is to understand the experience of military families when preparing their young children (aged 0-5) for kindergarten while stationed aboard Marine Corps Air Station, Yuma, AZ.

This needs assessment will take place in April 2017 and include approximately 8-10 interviews of stakeholders and military family members. Family members will also be asked to complete an electronic demographic survey.

PROCEDURES:
1. Participants who agree to be interviewed will sign the consent form email it to Kate McKenney at katejhu2019@gmail.com.
2. An agreed upon day and time will be scheduled for the interview. Interviews will last no more than one hour.
3. The interviews will be recorded and transcribed. After transcription, the audio recordings will be deleted or saved on a password-protected computer.
4. Military family members will be asked to complete a brief demographic survey electronically before the interview.

RISKS/DISCOMFORTS:
There are no anticipated risks to participants.

BENEFITS:
Potential benefits of this needs assessment are the increased understanding of the resources available for young military children and how military families take advantage of such resources. Also beneficial is further understanding of the strengths within the community for supporting school readiness for military children, as well as the challenges military families face preparing their children for school.

Title: School Readiness and Military Children
PI: Dr. Christine Eith
Date: April 2017

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:
Participation in this study is entirely voluntary. If you choose not to participate, there are no penalties or consequences. You may stop participation in the study at any time, without any penalty or consequence. If you would like to withdraw from the study or stop participating, please inform Kate McKenney via phone or email: (928) 550-0052, katejhu2019@gmail.com

CONFIDENTIALITY:
Any records of this study that contain your identity will be kept confidential to the extent possible by law. The files from your participation may be reviewed by people responsible for making sure that research is conducted properly. Members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the Office for Human Research Protections may review records that contain your identity. However, these officials are also required to keep your identity confidential. Otherwise, records that identify you will be available only to the Principal Investigator and Johns Hopkins University faculty working on the study unless you give permission for other people to see the records.

The Principal Investigator and research affiliates will examine all audio recordings, transcripts, and surveys only (including those entities described above). Surveys will be collected in electronic format and will not include identifiable information. A participant number will be assigned to you for the purpose of keeping your identity confidential, while still allowing the researcher to identify you. No identifiable information will be included in any published research or provided to outside organizations.

All research data will be kept on a password-protected computer. Any original electronic files will be erased within ten years after collection.

COMPENSATION:
You will not receive any payment or other compensation for participating in this study.

IF YOU HAVE QUESTIONS OR CONCERNS:
You can ask questions about this research study at any time by contacting Kate McKenney via phone or email: (928) 550-0052, katejhu2019@gmail.com

If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Johns Hopkins University Homewood Institutional Review Board at (410) 516-6580.

Title: School Readiness and Military Children
PI: Dr. Christine Eith
Date: April 2017

SIGNATURES:

Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study. By signing this consent form, you have not waived any legal rights you would otherwise have as a participant in a research study.

Signature	**Date**

Signature of Person Obtaining Consent (Investigator or HIRB-Approved Designee)	**Date**

Appendix E

Logic Model

Problem of Practice: Limited accessibility, availability, and affordability of high-quality community and military school readiness resources, exacerbated by a lack reliable information on program quality, are challenges for military families as they prepare their children for kindergarten in the context of Marine Corps Air Station Yuma, Arizona.

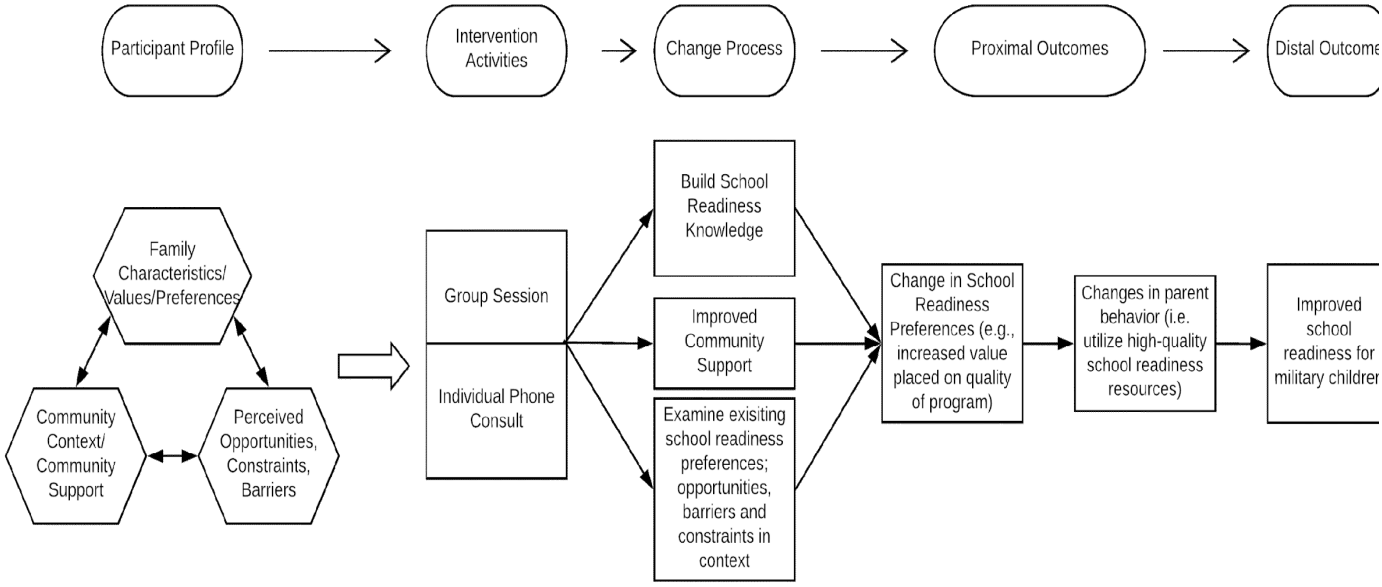
Inputs	**Outputs**	
	Activities and Participants	**Products**
• Free access to on-base meeting facility • Free internet access at MCAS Yuma Library • Support of Executive Sponsors and Local School Readiness Programs • Researcher expertise and time	Participants: • Eight primary care-giving military parents of children aged zero to five • Activities: • In-person group session • One-on-one phone consult with researcher following group session	• Lesson plan for group session using social learning principles (e.g., model how to identify high-quality school readiness programs) • Facilitators guide for phone consult (i.e. problem solve according to preferences and contextual constraints)

Outcomes	
Proximal	• Increased knowledge of school readiness concept and school readiness resources • Expanded perception of community support • Enhanced ability to identify quality school readiness programs • Change in school readiness program preferences (prefer higher quality)
Mid-Term	• Changes in parent behavior that increase utilization of high-quality school readiness resources (i.e. enrolling child in high-quality program)
Distal	• Improved military child school readiness for military children

Assumptions	**External Factors**
• School readiness is vital to future outcomes. • Military life impacts families uniquely due to deployments, separations, long-work hours, and relocation. • Military families want their children to be prepared for kindergarten but lack needed support.	• Lack of participant interest • Participant attrition due to relocation or other significant life event. • Lack of support from school readiness programs. • Lack of high-quality school readiness opportunities in this context.

Appendix F

Theory of Treatment



Appendix G

Community Assessment of Military Perceived Support Survey

In this survey, developed by Conforte et al. (2017), participants indicate if they agree or disagree with 25 statements about military community support.

1. There is NO ONE within the military community who would take care of my child(ren) in an emergency.
2. I feel like the military community is my own.
3. There is NO ONE within the military community that would provide transportation if I needed it.
4. My opinions are NOT valued in the military community.
5. There is NO ONE within the military community that would listen to me and/or help me feel better when I feel down.
6. Military family support agencies are effective in addressing the needs of military families. Some examples of these agencies include USA Army Community Service, USAF Airman and Family Readiness Center, USN Fleet and Family Support Center, USA Family Readiness.
7. I feel respected within the military community.
8. I feel a collective sense of community with others in the military community.
9. I am DISSATISFIED with the military community as an environment for raising children.
10. There are people within the military community that would lend me household tools or equipment if I needed it.
11. I DO NOT feel connected to other military families.
12. Staff from military agencies know and understand the needs of military families.

13. I feel a sense of common mission and purpose with others in the military community.
14. Military mental/behavioral health professionals are effective in addressing the needs of military families.
15. I am DISSATISFIED with the availability of activities for children and youth in the military community.
16. Chaplains are effective in addressing the needs of military families.
17. There are people within the military community that would give me valuable information about community agencies and resources if I needed it.
18. Opportunities, facilities, and services are equally accessible in the military community.
19. Military online sources (e.g., Military One source) are effective in addressing the needs of military families.
20. I am DISSATISFIED with the availability of mental health care for military families.
21. Someone like me cannot make a positive difference in the lives of others within the military community.
22. I am satisfied with the military as a way of life.
23. Members of the military community take advantage of opportunities to support the needs of other service members and families within the military community.
24. I am DISSATISFIED with the quality of preparation that military families get to deal with personal and family problems before a deployment.
25. I am satisfied with the quality of mental health care for military families

Appendix H

School Readiness Knowledge Survey

The purpose of this survey was to measure parent's school readiness knowledge before and after intervention participation.

1. By age five, what percentage of the brain has been developed?
2. Besides learning their ABCs and other early academic knowledge, what skills or competencies does a child need in order to be ready for kindergarten?
3. Describe a characteristic of a high-quality preschool or childcare.
4. What is Arizona's Quality First program?

Appendix I

Parent Perceptions of Child Care Choices and Quality Survey

Participants are to rank each statement on a scale from one to five with five being most important according to how significant each factor is when selecting an early childhood education program (Raikes et al., 2005).

1. A warm and loving provider style
2. The provider had a reputation for good care
3. The provider offers stimulating activities or programs
4. Physical facilities and equipment for play and learning
5. The provider has similar values to yours
6. The provider is someone you know and trust
7. Training or credentials of the provider
8. The number of children per provider
9. The provider emphasizes creativity in art, music ...
10. The provider's discipline and guidance styles match yours
11. Flexible or convenient hours
12. The provider accepts child care subsidy payments
13. The provider emphasizes school academics
14. The provider is accredited
15. Rate of provider turnover or changes in staff
16. A convenient location
17. The cost
18. The type of provider, such as child care center

19. The provider was recommended by a family member or friend

20. The provider accepts infants

21. Race, ethnicity, or language of the provider matches yours

22. The provider enrolls children with special needs

23. Already had another child enrolled with this provider

Appendix J

Participant Informed Consent Form

Title: Military Child School Readiness

Principal Investigator: Dr. Wendy Osefo

Date: February 2019

PURPOSE OF RESEARCH STUDY:

The purpose of this study is to better understand the experience of military families when preparing their young children (aged 0-5) for kindergarten while stationed aboard Marine Corps Air Station, Yuma, AZ. This research also seeks to understand how participation in a school readiness intervention will impact a military child's access to high-quality school readiness opportunities.

This study will take place from February through April of 2019 and include approximately 8-10 participants. Study participants will be expected to complete two electronic surveys, attend one in-person training, conduct a follow-up consult with the researcher over the phone, and be interviewed.

PROCEDURES:

1. Participants who agree to participate will sign the consent form email it to Kate McKenney at katejhu2019@gmail.com.
2. Interviews, in-person training, and phone consults will be scheduled on agreed upon days and times.
3. Participants will complete pre and post-intervention surveys online.
4. The interviews will be recorded and transcribed. After transcription, the audio recordings will be deleted or saved on a password-protected computer.

RISKS/DISCOMFORTS:

There are no anticipated risks to participants.

BENEFITS:

Potential benefits of this study for participants is increased knowledge of kindergarten preparation, as well as an improved understanding of local school readiness resources available for young military children. Benefits for the community include an enhanced understanding of school readiness challenges for military families, as well as current strengths of military and local support services and programs.

Title: School Readiness and Military Children
PI: Dr. Wendy Osefo
Date: February 2019

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:

Participation in this study is entirely optional. If you choose not to participate, there are no penalties or consequences. You may stop participation in the study at any time, without any penalty or consequence. If you would like to withdraw from the study or stop participating, please inform Kate McKenney via phone or email: (928) 550-0052, katejhu2019@gmail.com.

CONFIDENTIALITY:

Any records of this study that contain your identity will be kept confidential to the extent possible by law. The files from your participation may be reviewed by those people responsible for making sure that research is conducted correctly. Members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the Office for Human Research Protections may review records that contain your identity. However, these officials are also required to keep your identity confidential. Otherwise, records that identify you will be available only to the Principal Investigator and Johns Hopkins University faculty working on the study unless you give permission for other people to see the records.

All audio recordings, transcripts, and surveys will be examined by the Principal Investigator and research affiliates only (including those entities described above). Surveys will be collected in electronic format and will not include identifiable information. A participant number will be assigned to you to keep your identity confidential, while still allowing the researcher to identify you. No identifiable information will be included in any published research or provided to outside organizations.

All research data will be kept on a password-protected computer. Any original electronic files will be erased within ten years after collection.

COMPENSATION:

You will not receive any payment for participating in this study. Free childcare will be provided during the in-person training.

IF YOU HAVE QUESTIONS OR CONCERNS:

You can ask questions about this research study at any time by contacting Kate McKenney via phone or email: (928) 550-0052, katejhu2019@gmail.com

If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Johns Hopkins University Homewood Institutional Review Board at (410) 516-6580.

Title: School Readiness and Military Children
PI: Dr. Wendy Osefo
Date: February 2018

SIGNATURES:

Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study. By signing this consent form, you have not waived any legal rights you would otherwise have as a participant in a research study.

_____

Signature **Date**

_____

Signature of Person Obtaining Consent **Date**
(Investigator or HIRB-Approved Designee)

Appendix K

Demographic Survey

Thank you for accepting the invitation to participate in this study on school readiness for military children. The purpose of this study is to better understand the experience of military families stationed aboard Marine Corps Air Station Yuma, Arizona when preparing their young children for kindergarten.

Required for participation in this study is your signature on a consent form. After reading, please indicate below if you agree to participate.

I have read and understood the information in the attached consent form. I will not be waiving any legal rights by signing this form.

- I agree to participate.
- I would rather not participate at this time.

Are you a military spouse or a service member?

- Military Spouse
- Service Member
- Other _____

What is your marital status?

- Married
- Single
- Not married to current partner
- Divorced

What is your gender?

- Male
- Female
- Other_____

What parenting role do you play in your family?

- Single parent
- Primary caregiving parent (more than 50% of parenting responsibilities)
- Secondary caregiving parent (less than 50% of parenting responsibilities)
- Provides equal (50%) share of caregiving
- Other _____

Where did you grow up?

What is your race or ethnicity?

How many people live in your household (adults and children under 18)?

What are the ages of your children?

Child	Age
Child A	
Child B	
Child C	
Child D	

How many years have you or your service member been in the military?

What branch of the military?

What is the rank of the service member in your family?

- E1-E3
- E4-E5
- E6-E9

What is your family's combined income?

- 0 to $25,000
- $25,000- $50,000
- $50,000-$75,000
- $75,000 and up

How old are you?

- <18-21
- 22-26
- 27-35
- 35 and up

How old were you when your first child was born?

Since your first child was born, how many times have you moved to a new duty station?

Since your first child was born, how many months have you been separated from your service member due to deployments or other work-related duties?

How long (years/months) have you been stationed in Yuma?

What is the highest level of education reached in your family?

	Some High School	High School Graduate	Some College	College Graduate
Military Spouse				
Service Member				

Appendix L

Attendance Log

Participant Identifier	Pre-Intervention Survey	Pre-Intervention Interview	In-Person Training	Phone Consult	Post-Intervention Interview	Post-Intervention Survey
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

Appendix M

Phone Consult Facilitators Guide

The four goals of the phone consult are reviewing content, exploring choices and potential plans, problem-solving, and reflecting or determining next steps. The facilitator's script is flexible to ensure the participant's needs are met. The following are sample prompts or questions for each goal:

1. Content
    a. Do you have questions about the topics we covered in training?
    b. Was there anything presented at the training that surprised you or made you stop and reconsider your previous ideas of school readiness?
2. Exploring Choices and Preferences
    a. What school readiness choices are you considering for your child? Why?
    b. Do you have a plan to achieve these goals?
3. Problem-Solving
    a. Are you facing obstacles in finding, selecting, or enrolling in school readiness opportunities?
    b. Are there resources or further information you believe you need?
    c. Are there any upcoming life events (births, travel, deployments, relocation, significant expenses) that may interfere with your efforts to prepare your child for kindergarten? What can be done to reduce any negative consequences?
4. Reflection and Next Steps
    a. How do you feel about your child's school readiness opportunities in Yuma?
    b. What are your next steps in this journey of preparing your child for school?

Appendix N

Preintervention Interview Protocol

The following questions align with the indicated research question.

1. Do you foresee any circumstances that could affect your participation in this study (e.g., transportation, childcare, employment)? (RQ2)
2. What are ways you believe you learn and retain information best (e.g., lecture/notes, handouts, reading, listening, seeing or watching, individual work, group work, real-work scenarios, hands-on)? (RQ3)
3. What kind of help do you know is currently available to help you make school readiness decisions? Is this adequate? Do you feel you need more information, resources, or support? (RQ4)
4. What do you know about school readiness? How do you know what you know? (RQ5)
5. What kind of school readiness opportunities are you interested in for your child? Where did your ideas or beliefs about preparing your child originate? Who or what has the most influence on your preferences and choices for your child's early education? (RQ6)

Appendix O

Postintervention Interview Protocol

Interview questions to address process evaluation Research Question Two (How did the research design alleviate or intensify contextual constraints which affect participation?) include:

1. How did the design (in-person, over the phone, free childcare, location of training, scheduling) of this program allow or discourage your full participation? Was participation affected by transportation, childcare, communication, scheduling, or other factors?

Interview questions to address process evaluation Research Question Three (What were participant perceptions of their intervention experience?) include:

2. How did you perceive the usefulness or relevance of the phone consult and group session?
3. What learning approaches influenced, positively or negatively, your engagement and interest during the training?
4. From your perspective, which training topics were most relevant or useful for you? Which did you not find helpful? Why?

Interview questions to address outcome evaluation Research Question Four (To what degree did the intervention change the community support perceived by participants between pre and post-intervention?) include:

5. How did this intervention impact the level of support you have felt while seeking school readiness opportunities for your young child?
6. To what extent did your participation make you feel more connected to other members of the military or local community?

7. Do you think you have the adequate support and resources, through local and military agencies or professionals, necessary to prepare your child for kindergarten while stationed in Yuma?

Interview questions to address outcome evaluation Research Question Five (To what extent did the intervention change school readiness knowledge of participants between pre and post-intervention?) include:

8. How has the intervention changed what you know about school readiness?

Interview questions to address outcome evaluation Research Question Six (How did the intervention change school readiness preferences of participants between pre and post-intervention?) include:

9. Have you learned any new information that has changed what you will look for in a school readiness program in the future?
10. Which program characteristics have become more or less important, or stayed the same? Why?
11. Were there topics covered in the training that changed the way you think about school readiness, which may alter the choices you make for your child in the future?

Appendix P

Group Training Content

Essential question	Learning objectives	Activities
1. Why are the first five years so important?	Early brain development (importance of early experiences, relationships, toxic stress, serve and return interactions)	Notetaking; brain architecture Jenga game; reflection and discussion
2. What does it mean to be ready for kindergarten?	School readiness domains; executive functions; early childhood development; parenting resources	Notetaking; school readiness domain group sorting game; reflection and discussion
3. What are the characteristics of a high-quality preschool or childcare?	Characteristics of a high-quality school readiness program; measures of quality	Notetaking; reflection and discussion
4. How can I find high-quality, affordable early learning opportunities in Yuma and at other duty stations?	How to search for a high-quality program	Navigating the early childhood maze activity with partner; reflection and discussion

Curriculum Vitae

CATHERINE H MCKENNEY
katehmckenney@gmail.com

Experience Chronology

Doctoral Candidate
2016-Present
Johns Hopkins University School of Education

- Accepted into small, selective Doctorate of Education cohort. Concentration in Entrepreneurial Leadership in Educational Organizations. Graduating May 2020.
- Selected as 2016 Tillman Foundation Scholar. Competitive scholarship for civic-minded veterans and military spouses.
- Engaged in rigorous coursework from August 2016- May 2019. Cumulative GPA of 3.9
- Dissertation focused on kindergarten readiness for military children.

Founder, President, Director
2014-2016
New Bern Cooperative Preschool, New Bern, NC

- Founded the first cooperative preschool in Eastern North Carolina. Fully operational within nine months, from concept development to school opening with full enrollment.
- Monitored operating budget and financial projections; achieved 501c3 status; implemented scholarship program; authored school policies and procedures according to state and local regulations and early childhood best practices; created community partnerships;
- Recruited, trained, supervised, and evaluated teaching staff. Recruited families for enrollment and volunteering within school, to include service on Board of Directors.

Consultant, Professional Development Content Specialist
2014-2017
Discovery Education, Silver Spring, MD

- Created multiple innovative professional development trainings for K-12 teachers, administrators, and parents.
- Integrated digital and media resources into unique, research-based instructional platforms.

Administrator, Child and Youth Program
2013
Marine Corps Community Services, Yuma, AZ

- Managed operations and overall administration of the Child Development Center, Youth and Teen Center, Resource and Referral, and the Family Home Child Care Program. Directly supervised and evaluated program directors, ensured compliance with all Marine Corps Orders and accreditation requirements.
- Executed budgets totaling approximately $2.5 million.

- Oversaw or directly participated in the hiring, supervision, evaluation, and training of more than 120 employees (teacher, nurse, behavioral specialist, janitor, curriculum specialist) who provided services for over than 300 children.
- Identified need to improve instructional design of professional development trainings. Created and led peer review teams to examine and revise trainings.

Director, Child Development Center
2011-2013

Marine Corps Community Services, Yuma, AZ

- Directed operations for Center and Annex (two facilities) for approximately 230 children from 6 weeks to 5 years.
- Oversaw successful NAEYC reaccreditation process, as well as annual Marine Corps Headquarters unannounced inspections. Earned 98% in annual United States Marine Corps Headquarters review of program- one of highest in Marine Corps.
- Participated and oversaw hiring, training, supervision, and evaluation of 90 personnel to include teachers, kitchen staff, custodians, and assistant directors.
- Developed and implemented $1.5 million budget.
- Oversaw implementation of Creative Curriculum.

Director, Marine Corps Family Team Building
2009-2011

Marine Corps Community Services, Yuma, AZ

- Oversaw family readiness program training and on-going support and guidance to commanders, Marines, Family Readiness Officers, and military families during era of expansion of services and high operational tempo.
- Lead staff of four in implementing over 25 training programs a month, organized several large annual events, and fostered increased communication on readiness issues within the community through monthly family readiness meetings and the introduction of monthly newsletters and social networking.
- Created trainer position that focused exclusively on programming for military children.
- Developed and managed $300,000 budget.
- Collected and analyzed quantitative and qualitative data to drive programmatic decisions.

Program Specialist in Office of Teaching and Learning
2007-2008

Headquarters, District of Columbia Public Schools, Washington, D.C.

- Performed audits, classroom evaluations, and testing oversight to monitor schools for performance.
- Determined optimal instructional interventions for schools through the collection and analysis of test data.
- Assisted over 100 parents with applications, school placement, and transportation during School Choice implementation.
- Implemented *Saturday Scholars* academic intervention program at 47 schools with 4,000, 3rd to 6th-grade children. Coordinated curriculum trainings for 400 teachers. Monitored

and supported teachers in curriculum implementation and site coordinators in program management.

Teaching Experience

- **Arizona Western College,** Yuma, AZ: *Cultural Diversity in Education (EDU 210) Instructor. 2008-2011*
- **Valley Horizon Elementary School,** Yuma, AZ: *6th Grade. 2008-2009*
- **Crane Middle School,** Yuma, AZ: *8th Grade Social Studies. 2005-2007*
- **Morningside High School,** Inglewood, CA: *Social Studies*. 2003-2005
- **Charlottesville High School,** Charlottesville, VA: *Social Studies.* 2002-2003

Professional Pursuits and Recognition

- **Certifications**. Current Standard Professional Principal Pre-Kindergarten to 12th Grade Certificate and secondary teaching license in the State of Arizona.
- **Volunteer.** Family Readiness Advisor (Marine Corps), 2017-18. Girl Scouts, 2017-Present.
- **Board of Directors**. Arlington Unitarian Cooperative Preschool. Auction Chair raising $18,000. 2016-17.
- **Japan Fulbright Memorial Fund Teacher Program Participant**. Studied Japanese culture and education in Japan. Created multi-media lesson. Fall 2006.
- **U.S. Department of Education's Fulbright-Hays Seminar Abroad Participant.** Studied sustainable economic development in Ecuador. Authored and published unit plan on sustainable land use. Summer 2005.
- **Goethe Institute's Transatlantic Outreach Program Fellow**. Travel-study seminar exploring modern Germany. Wrote lesson plan, trained teachers in curriculum. July 2003.

Education

Educational Leadership and Administration Post-Master's Certificate

- *George Washington University, Washington, D.C., June 2008.*
- Coursework included 80-hour Principal Internship at elementary school

Master of Education

- ***University of Virginia,*** *Charlottesville, VA, August 2003.*

Bachelor of Arts, Government and Economics Majors

- *College of William and Mary, Williamsburg, VA, May 2000.*